The Impact of Accountability and Accountability Management on Performance at the Street Level

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ABSTRACT

Performance management is prevalent in public organizations and public services, but the push for performance may harm genuine accountability. One critical reason for this is that little knowledge has developed about the scope and effect of actual accountability requirements in the public management field. This dissertation furthers our understanding of accountability and performance by distinguishing them as different dimensions of public management. Building on this distinction, the effect of accountability (A) on performance (P) and accountability management's (M) mediating role in the relationship between accountability and performance were investigated empirically in child welfare services in Virginia. The study had two stages: interviews and a survey. The qualitative content analysis of the interviews provides several noteworthy findings. Accountability can be understood more with the terms: explanation, expectation, people/society, action/decision, and values. Conversely, performance can be considered more in line with the terms: productivity/outcome, timely work, team playing, learning, and strategy. The incompatible characteristics found between accountability and performance highlight problems behind performance-driven accountability. The survey portion of the study, built upon the interview data, also presents notable findings. (1) Accountability affects performance both directly and indirectly, and (2) accountability management matters in the relationship between accountability and performance. While the empirical literature on the A → P link focuses on the effects of competing accountability requirements, my study examines dimensions of the accountability requirements' impact. Formal (e.g., legal) as well as informal (e.g., ethical) accountability requirements are critical for ensuring higher performance. Compliance strategies implicitly connect informal accountability requirements with work performance. The findings support the study's argument that accountability should be stressed for better performance and highlight the need for the careful design of accountability mechanisms in social services. Ultimately, this study may serve as a foundation for future efforts to establish more appropriate accountability and performance arrangements.

DEDICATION

I dedicate this work to my family for their faithful love and support. I want to extend a special

feeling of gratitude to my loving parents:

Gi-yeon Hwang

Young-kum Choi

I want to thank God, the one who gives me a purpose in life and makes all that I do possible. All

the glory, honor, and praise for all I have done and ever will be must go to Him.

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CHAPTER 1. INTRODUCTION

1.1. Problem Statement

Both government accountability[1] and government performance have been central in public
management (Behn, 2001). The effort to enhance both values and mechanisms of public
organizations supports the rationale that the essence of public administration is 'making
government work.' Some use the terms "accountability" and "performance" interchangeably. It
is true that both terms blur into each other.[2] For example, when a government adopts certain
public service assessment tools (e.g., budget reports), it is attempting either to enhance
accountability or improve performance. This dissertation distinguishes these terms as different
dimensions of public management (see Halachmi, 2002a, 2002b). Performance is about whether
resources have been used in the intended way in order to achieve greater efficiency,
effectiveness, and fairness (Brewer & Selden, 2000; Halachmi, 2002a, p. 371).[3] Accountability,
by contrast, is defined as managing and meeting public and other expectations for performance
and responsiveness (Kearns, 1996; Romzek & Dubnick, 1987). Through these definitions, it is
possible to see that even though performance is satisfactory, accountability expectations may not
be met.

Performance measurement (Thomas, 2006) was designed to make bureaucracies work
better (Moynihan et al., 2011) and track accountability (Alexander, Brudney, & Yang, 2010; de

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[1] Throughout the dissertation, the term "accountability" is used interchangeably with the term "accountability
requirements," "accountability expectations," "accountability demands," or "accountability pressures."
[2] Some studies use the term "performance accountability" or "performance-based accountability" (Moynihan &
Ingraham, 2003; Yang, 2011). Here, the term performance indicates a result-oriented accountability.
[3] In the context of child welfare, performance is defined as "whether a system is functioning as intended, for
example, whether the right services are being delivered to the right people at the right time" (p.7) according to a
report from Casey Family Programs (Casey Family Programs, 2011).

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Lancer Julnes, 2006). Performance measurement is "the regular and careful monitoring of program implementation and outcomes" (de Lancer Julnes, 2006, p. 223). Arguably, the appeal of performance measurement is that it can help government agencies clarify their missions and goals. Also, performance measurement provides them with feedback, thereby improving the responsiveness of government (Amirkhanyan, 2011; Yang, 2011).

We have observed, however, that 'accountability through performance'—which means performance-driven accountability or managing for results—might give us the illusion of accountability (Brodkin, 2008). For example, the Government Performance and Results Act of 1993 (GPRA) was intended to improve accountability in the United States federal government. Yet, it did not consider the complex goals and the multiple accountabilities that present themselves in federal programs (Radin, 2006, 2011). In addition, it undermined the long-term accountability and productivity of agencies (Halachmi, 2002a).

Similarly, in 2001, the U.S. Department of Health and Human Services' (HHS) Administration for Children and Families (ACF) instituted Child and Family Service Reviews (CFSRs)[4] to measure the states' performance and hold states accountable for child welfare outcomes. While the goals—safety, permanency, and family and child well-being[5]—behind this effort to improve the performance of state child welfare systems are clearly desirable, studies warn that ACF's push for performance may harm "real" or "true" accountability (Courtney, Needell, & Wulczyn, 2004; O'Donnell, 1992; Schuerman & Needell, 2009).[6] For instance, a

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[4] More information about the Child and Family Service Reviews is available at http://www.acf.hhs.gov/programs/cb/cwmonitoring/index.htm#cfsr.

[5] *Safety*: Children are protected from abuse and neglect and are safely maintained in their homes whenever possible and appropriate. *Permanency*: Children have permanency and stability in their living situations and continuity in their family relationships and connections. *Child and family well-being*: Families are better able to provide for their children's needs, and children are provided services that meet their educational, physical health and mental health needs. See Testa and Poertner (2010) for theoretical and detailed discussion of these three issues in child welfare.

[6] It should be noted that CFSRs do not focus only on numbers but also seek qualitative information on state performance, which is collected through reviews of actual case records and interviews with children, families and

www.manaraa.com

focus on any specific set of performance measures is likely to encourage efforts "to look good at the expense of being good" (Casey Family Programs, 2011).[7]

These examples demonstrate that the effect of performance on accountability may not always be as positive as we expect in public organizations. One critical reason for this is that the public administration field rarely recognizes the actual scope and intricacy of accountability, even though strong emphasis has been placed on accountability in public sector (Greitens, 2012).[8] Performance measurement is commonly expected to enhance 'political' accountability (Yang, 2011), yet the scope of accountability varies; it has political, hierarchical, professional, and legal dimensions (Romzek & Dubnick, 1987). The CFSRs aims to help states improve child welfare services for families and children; yet child welfare practitioners and experts question whether the reviews provide an accurate picture of state performance (Casey Family Programs, 2011). For instance, there has been continuous discussion in the child welfare literature as to whether the outcome measures required by the federal government are accurate indications of overall child welfare system performance (Courtney et al., 2004), and child welfare practitioners have expressed concern that performance measurement has focused on inappropriately narrow outcomes (Tilbury, 2004).

Also there are gaps among the views of the concepts of accountability and performance. A *Kettering* report found that government leaders see accountability as measurement that drives improved performance, while citizens see accountability as responsibility by leaders and citizens themselves (Johnson, Rochkind, & DuPont, 2011). We must go beyond perfunctory

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others. The warning should be understood as a concern that the push for performance may defeat the service-oriented aspirations of frontline workers.

[7] This issue is discussed below (e.g., section 2.2.1).

[8] Of course, the scope of performance is also wide and dynamic (see Boyne, 2003; Moynihan, 2008), but I argue that the scope and intricacy of accountability is greater than those of performance in public management (see further discussion in Chapters 2 and 4).

accountability through performance to take accountability seriously both as a substantive issue and as a management activity.[9] As Lipsky (2010) observes in the thirtieth anniversary edition of *Street-Level Bureaucracy*, efforts to improve government take on new meaning in the context of twenty-first century skepticism about government:

> Improving schools or the welfare system or policing are *not* just matters of achieving more effective public services at the appropriate cost. They may also be understood as contributing to a more *substantial agenda* in which government, by improving its public services, across all the divides of race, ethnicity, and class, is perceived as fair and trustworthy (pp. 220-221, emphasis added).

1.2. Purpose of the Study

The purpose of the study is to further our understanding of accountability and performance as different dimensions of public management and of the effect of accountability on performance (the 'A→P link'). The A→P link is a growing topic of scholarly study; it is emerging as a counterpart to studies of the effect of performance on accountability. Given the growing body of research on the determinants of performance (Lynn, Heinrich, & Hill, 2000; O'Toole Jr. & Meier, 1999, 2011; Rainey & Steinbauer, 1999), the focus of this study reminds us of the importance of accountability as an independent variable within the management-performance nexus for better public service provision (Dubnick, 2005). It is important to note, however, that this study's focus is not the effect of "conflicting" accountability (S. E. Kim & Lee, 2010) but the effect of "each dimension" of accountability.[10] The literature finds perverse effects of conflicting accountability requirements (Romzek & Dubnick, 1987; S. E. Kim, 2005; S. E. Kim

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[9] The importance and value of 'performance measurement' for monitoring aspects of practice must nonetheless be acknowledged. As over thousand senior officials said, the use of performance measurement was first for better managerial decisions and was based on citizen demands for greater accountability (Poister & Streib, 1999), although recent study identified that good performance measurement rarely lead to robust performance management since municipal governments do not use performance information (Sanger, 2012).

[10] The conflicting nature of accountability in the child welfare context appears in section 4.3.1.

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& Lee, 2010). Given the paradox or web of accountability in practice (Jos & Tompkins, 2004) and the prescriptive argument of balancing competing accountability requirements (S. E. Kim, 2005), more precise understanding is needed of the effect of each dimension of accountability requirements on work performance.

Accountability may either enhance or hinder performance (Ossege, 2012). In their review of accountability research, Lerner and Tetlock (1999) conclude that "accountability is a logically complex construct that interacts with characteristics of the decision maker and properties of the task environment to produce an array of effects—only some of which are beneficial" (p. 270). Examining accountability concepts among individual civil servants in the United Kingdom, Lupson and Partington (2011) identify how individuals understand and experience accountability. Yet, this study only focused on accountability, so the exact relationship between accountability and performance is not well explained by evidence of 'accountability for performance.' Although there is an intuitive link between accountability and performance in some empirical studies (S. E. Kim, 2005; S. E. Kim & Lee, 2010), it remains for the relationship to be established empirically and for the degree to which accountability affects performance to be determined.

Although the relationship may not be as clear as we want it to be, it is not any less important to reconsider the effect of accountability on performance, the so-called "pursuit of accountability" (Dubnick & Yang, 2011) because accountability can be understood as an "answer for performance" (Romzek & Dubnick, 1998, p. 6). The goal of accountability is to ensure that public administrators pursue publicly valued goals and satisfy legitimate performance expectations (Romzek & Dubnick, 1998, p. 11). Careful attention to accountability helps to define the problem and to find a solution in public management (Dubnick & O'Brien, 2011). In

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addition to the management field, decisions about accountability and performance management need to be a key part of policy design, since they play a role defining how problems are understood and addressed. Thus, this study offers a framework to assist in designing appropriate accountability and performance arrangements.

Accountability research in public administration has evolved.[11] Accountability in modern organizations has been studied as a matter of accountability *to whom* and *for what* (Bardach & Lesser, 1996) as well as a matter of *accountability how* (Behn, 2001). A recent collection of papers on accountability (Dubnick & Frederickson, 2011a), building on discussions from a 2008 symposium sponsored by The Kettering Foundation, also identifies three accountability themes for public administration: the problematic meaning of accountability (for what), the existence of multiple accountabilities (to whom), and the emphasis on accountability mechanisms rather than on accountability itself (how). Nonetheless, it is fair to say that the study and practice of accountability are still in their infancy (Greitens, 2012, p. 80). In particular, beyond the three basic questions pertinent to accountability, the specification of an accountability system *with what consequences* is rarely contested. Some understand 'consequences' as sanctions and incentives, particularly in the education and financial fields, but I understand them as the effects; for instance, the effect of accountability on performance. For practitioners, therefore, it remains unclear how to tackle cross pressures for accountability and what to do with conflicting prescriptions to improve performance (Dubnick & Yang, 2011).

Beyond helping to explain the complex nature of accountability and its effects, insights gleaned from the proactive role of public workers who manage their agencies' accountability

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[11] Besides the public administration field, business (Bergsteiner, 2012; Bergsteiner & Avery, 2003, 2009; Frink & Klimoski, 1998, 2004), social psychology (Tetlock, 1992; Tetlock & Mellers, 2011), political science (March & Olsen, 1995), and education (Biesta, 2004) are among the areas in which accountability studies have been undertaken.

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expectations can contribute to the development of the concept of *accountability management*.
The accountability management perspective that I propose is based upon the premise that public
workers not only face but also manage their accountability environment by using their discretion.
The accountability management point of view is critical in that the way that workers (either
managers or front-line workers) manage accountability may exacerbate or dilute the potential
effect of accountability. This study applies a strategic perspective to accountability management.
How public workers manage their accountabilities with different strategies is the point of
accountability management. Thus, in assessing the effect of accountability on performance, more
knowledge of public workers' accountability management strategies may further our
understanding of the A→P link. The idea of my dissertation is portrayed in Figure 1. More
details about the analytical framework appear in Chapter 3.

Figure 1: Conceptual Model
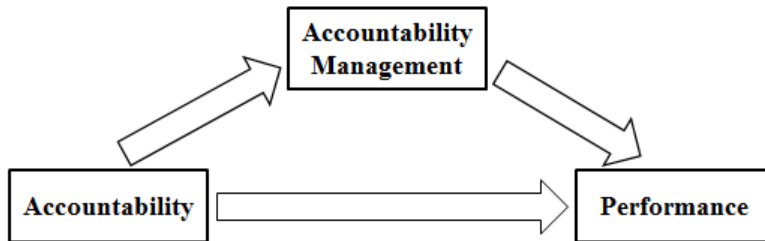
1.3. Policy and Organizational Setting: Child Welfare Services

This dissertation examines empirically the A→P link from a novel street-level perspective.
The street-level perspective offers a lens through which we can better understand the dimensions
of administrative practice that include accountability and performance mechanisms. Examining
accountability in street-level organizations is appropriate because discretion, which has a

significant correlation with accountability and accountability management, is assumed in theory, and pervasive and possibly indispensable in practice. Brodkin (2012) observes that street-level studies "have brought a critical perspective to bear on consideration of issues such as *performance* and *accountability*" (p. 5, original emphasis).

This dissertation studies accountability's effects upon performance in the context of child welfare services. Child welfare covers a spectrum of services including the identification of neglect and abuse, prevention of neglect and abuse, removal of children suspected to have been abused or neglected from their homes, family preservation and reunification, foster care, independent living programs for children aging out of foster care, termination of parental rights, and adoption. The child welfare system was created to help every child have a safe and secure home life. This responsibility has been mainly given to public child welfare agencies. But the courts, private child welfare agencies, and other service systems (such as mental health, substance abuse, healthcare, education, and domestic violence) also serve children and families who come to the attention of the child welfare system (McCarthy et al., 2005).

My focus is *public child welfare caseworkers* in the state of Virginia,[12] which include personnel in the areas of adoption, child protective services (CPS), family preservation, and foster care (for the flow of cases through the CPS and child welfare systems, see Appendix A). Child welfare systems often are managed through a steadily expanding regulatory framework that sets forth procedures, timeframes, documentation requirements and review processes. These management practices encourage caseworkers to look for other careers, and they are contrary to a culture of responsibility and professional growth. Correspondingly, there has been a movement to balance compliance with a regulatory framework (i.e., performance) and an emphasis on

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[12] More details about the study target were described in section 3.1.3.

professional commitment (i.e., accountability) (Casey Family Programs, 2011). The child welfare field entails a dynamic accountability and performance context. For instance, greater emphasis on accountability comes from both the government (federal, state and local) and its laws and policies and from stakeholders and citizens. In the design and delivery of child welfare services, local and state governments face mandates to improve service performance from many sources, ranging from federal requirements to court decisions.

In this section, I briefly discuss child welfare policy in the United States.[13] Then, I introduce how child welfare programs operate in Virginia. Lastly, accountability and performance problems of interest in child welfare services are described.

1.3.1. Policy Setting[14]

The 1960s and 1970s marked the inception of child welfare policy making, as the federal and state governments assumed greater responsibility for social welfare programs. The federal goals for children in the child welfare system are *safety, permanency, and well-being*. The federal financing framework for the child welfare system is quite complex, with funding coming from several different sources, each with its own requirements and limitations. The largest pot of dedicated funds for child welfare comes from Title IV-E of the Social Security Act.

The Child Welfare Services program provides grants to states and Indian tribes under title IV-B of the Social Security Act.[15] Services are available to children and their families without

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[13] For an excellent view of child protection policy and history in the US, see Myers (2008); Schene (1998); and the website at https://www.childwelfare.gov/pubs/otherpubs/majorfedlegis.cfm.

[14] For information on the Children's Bureau policy, visit the website at http://www.acf.hhs.gov/programs/cb/laws_policies/index.htm.

[15] Title IV of the Social Security Act is administered by the U.S. Department of Health and Human Services. The Administration for Public Services, Office of Human Development Services, administers social services under Title IV, Parts B and E. Part B is child and family services; Part E is federal payments for foster care and adoption assistance (Source: http://www.ssa.gov/OP_Home/ssact/title04/0400.htm).

regard to income. The Child Abuse and Neglect program funds states and grantees in several different programs authorized by the Child Abuse and Neglect Prevention and Treatment Act (CAPTA), which was originally enacted on January 31, 1974 and most recently amended and reauthorized on December 20, 2010, by the CAPTA Reauthorization Act of 2010.

For those children who cannot remain safely in their homes, foster care provides a stable environment that assures a child's safety and well-being while their parents attempt to resolve the problems that led to the out of home placement. When the family cannot be reunified, foster care provides a stable environment until the child can be placed permanently with an adoptive family. Foster Care and Adoption Assistance programs are authorized under title IV-E of the Social Security Act.

Family Support Services, often provided at the local level by community-based organizations, are voluntary, preventive activities intended to help families nurture their children. These services are designed to alleviate stress and help parents care for their children's well-being before a crisis occurs. They connect families with available community resources and supportive networks which assist parents with child rearing. Family support activities include respite care for parents and caregivers, early developmental screening of children to identify their needs, tutoring, health education for youth, and a range of center-based activities.

Family Preservation Services typically are activities that help families alleviate crises that might lead to out-of-home placements of children. They help to maintain the safety of children in their own homes, support families preparing to reunify or adopt, and assist families in obtaining

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other services to meet multiple needs. Family Preservation and Family Support Services is authorized through Title IV-B, subpart 2 of the Social Security Act.[16]

In 2000, the Department of Health and Human Services announced child welfare regulations designed to improve outcomes for abused and neglected children, children in foster care, and children awaiting adoption. The regulations hold states accountable for services to at-risk children with a results-oriented approach in federal monitoring of state child welfare programs. Under the regulations, states are assessed for compliance with federal requirements for child protective services, foster care, adoption and family preservation and support services under titles IV-B and IV-E of the Social Security Act. Those services cover the investigations of families where children are at-risk, placements and supervision of children in foster care, development of child permanency plans for court hearings, reunification with birth families, when safe, and adoption (The Children's Bureau, 2009).

1.3.2. Child Welfare in Virginia[17]

The delivery of child welfare services is primarily a state and local responsibility, although federal statutes and regulations provide guidance and minimum standards for key aspects of service provision. The work at the state and local level requires considerable discretion in deciding how to implement services. Hence, Webb and Harden (2003) note that there are

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[16] Source: https://www.childwelfare.gov/ and
http://www.acf.hhs.gov/cwpm/programs/cb/laws_policies/laws/cwpm/index.jsp
[17] To summarize the policy and legislation in Virginia,
1) Adoption: Title 63.2, Chapters 12 through 14; Title 16.1, Chapter 11, § 16.1-283.1
2) Child Protection: Title 63.2, Chapter 15
3) Child Welfare: Title 63.2, Chapter 9 through 11; Title 16.1, Chapter 11, §§ 16.1-281 through 16.1-283; 16.1-349 through 16.1-355
4) Youth Services: Title 63.2, Chapter 9, §§ 63.2-904, 63.2-905.1
Website for Statutes: http://lis.virginia.gov/cgi-bin/legp604.exe?000+cod+TOC

substantial variations across states and localities in terms of how child welfare services are provided.

In the early 1990s the Virginia General Assembly passed the Comprehensive Services Act (CSA). At a time when many states had a patchwork arrangement for providing services for vulnerable children and families, CSA provided a mechanism for pooling eight different child-services funding streams. The point was to spur innovation and develop a system of child-centered, cost-effective services. By 2006, however, it was clear CSA's promise was largely unrealized. Increased competition, not collaboration, was rampant. This especially was challenging given that Virginia provided services through more than 120 locally administered entities with only broad state oversight (Walters, 2010).

Since 2007, there has been strong momentum and aggressive action again in Virginia to build upon the strengths of the current system and systematically transform children and family services (Ledden, 2011). Virginia is pursuing primary strategies to improve safety, permanency and well-being outcomes for children and families. These strategies are fundamental for transforming and strengthening Virginia's service system. They strive to create a more comprehensive, family-focused, integrated and effective service of care for children and families. In conjunction with local departments of social services and community action agencies, the department has embraced a system-wide strategic planning process such as the Practice Model,[18] which guides decision making and encourages caseworkers to improve services for children and families. Over the past several years, significant progress has resulted from increased focus and collaboration to improve performance management, program efficiency and the achievement of key outcomes (Ledden, 2011).

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[18] See a document about the Practice Model at http://www.dss.virginia.gov/about/vdss_pm.pdf.

State legislators help to promote the delivery of quality child welfare services through their budgetary and oversight roles. The courts decide whether a child will be removed from the home, placed in foster care, or freed for adoption and determine the nature and extent of services provided to children, youth, and their families (National Conference of State Legislatures, 2006). The Virginia Department of Social Services (VDSS) Division of Family Services is responsible for developing policies, programs and procedures to guide local social service agencies in providing direct services to Virginia's citizens in need of social services assistance (Department Of Social Services in Virginia, 2012). The Division provides administrative direction through comprehensive planning, policy oversight, program monitoring and technical assistance to regional offices, local agencies, and private vendors. Then, child welfare programs are locally administered by 120 Local Department of Social Services (LDSS).

VDSS has strengthened its commitment to strategic planning and performance management and will continue to do so (Walters, 2010). The goal of improving the performance of state child welfare systems is clearly desirable. I argue, however, that efforts to improve child welfare services for citizens without clarifying the relationship between accountability and performance fall short of a well-balanced meaning of quality services. Too often child welfare programs are failing our society's most vulnerable children (Schuerman & Needell, 2009), and we need to rethink what accountability means in the program, not just accountable for performance (Casey Family Programs, 2011), as I posed a problem at the first section of this chapter.[19] According to one data source,[20] child maltreatment victims'[21] rate per 1,000 in Virginia increased from 3.2 in 2008 to 3.3 in 2009 and to 3.6 in 2010.

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[19] This issue was raised more explicitly in the discussion of organizational settings. See the following section.
[20] Data from National Data Archive on Child Abuse and Neglect Data System (NCANDS): A service of the Children's Bureau provided through Cornell University that offers information and assistance with NCANDS data. Available at http://www.ndacan.cornell.edu/

1.3.3. Organizational Setting

In this study I analyze child welfare services provided by the VDSS and the LDSS. Child welfare programs in Virginia are supervised by the state and implemented at the county or city level. Central to those child welfare services is the role of caseworkers (front-line workers) whom I am interested in observing. Here is an illustrative child welfare case example (National Conference of State Legislatures, 2006):

> The case of Sara, age 6, was reported to the state child welfare agency by a teacher after the child came to school covered with bruises. Agency staff conducted the initial investigation, determined that Sara (but not her two younger siblings) had been abused by their father following a drinking episode, and then assessed the children's current safety and risk of future harm. Because the father was temporarily living outside the family home and the mother indicated her interest in receiving agency services and supports to protect her children, the staff recommended that the family receive in-home services. Sara and her family were assigned a caseworker, who conducted a follow-up safety and risk assessment and met with the family to develop a safety plan (to include dealing with potential safety issues during visits by the father) and to discuss their needs.
>
> The caseworker, after jointly conducting the needs assessment with all family members (including the father), then arranged for the family to receive services that were individualized to address the issues that they identified as leading to the reported incident, as well as services to enhance the family's overall well-being. The caseworker subsequently met with the family every two weeks for the first two months and monthly thereafter until the case was closed. During those visits, the caseworker sought to ensure the safety of the children, monitored the implementation of the safety plan, and assessed the family's engagement in, and response to, the services provided.

Caseworkers spend most of their time in the field outside of the office (Paddock, 2003). According to the American Humane Association's (AHA) report, child welfare workers use almost half of their time with clients in so-called 'visits' (see Figure 2). Because of this, it is not easy for case supervisors to hold staff accountable. This also implies that performance measurement can be biased if it does not examine what and how caseworkers are doing their job in the field. Being caught in a resource crunch caused by under-budgeting exacerbates the issue of accountability for caseworkers. For instance, the Child Abuse Prevention and Treatment Act

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[21] Children with more than one report of substantiated or indicated maltreatment may be counted more than once.

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(CAPTA) of 1974 was designed to ameliorate the problem of child abuse. The act requires CPS

workers to promptly investigate child abuse reports, but agencies had inadequate resources to

deal with the number of complaints.[22] Many CPS workers were unable to properly investigate

allegations of abuse (Karger & Stoesz, 2010, p. 4; Paddock, 2003).

Figure 2: Percent of Worker Case-related Time
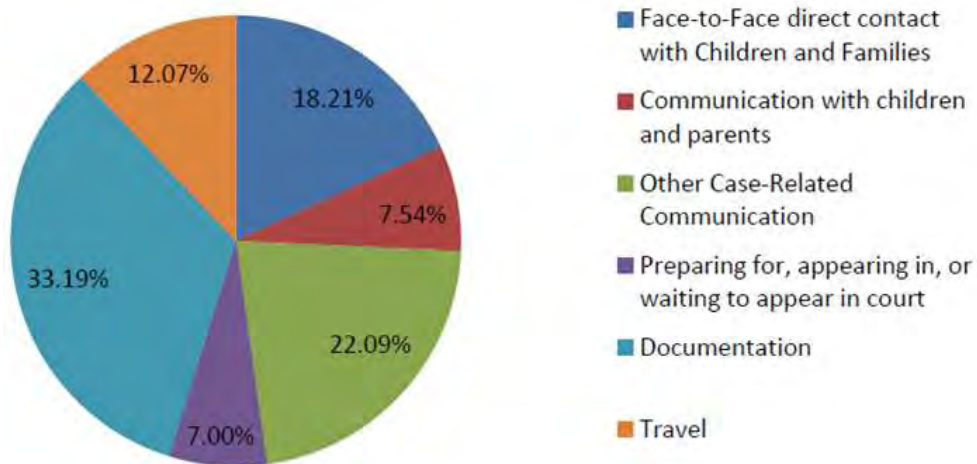
Source: American Humane Association (American Humane Association, 2011),
Child Welfare Policy Briefing: Child Welfare Workforce

Case staffers in each local jurisdiction have been challenged by diverse accountability

demands while they accept and decide on the validity of reports of child abuse or neglect. For

example, while guidance pushes caseworkers toward family reunification, caseworkers indicate

that parents rarely change and do not well put an effort to be improved such that they deprioritize

activities with parents but instead increase other activities such as child visits, for which they are

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[22] The number of CPS complaints has remained relatively stable over the past 10 years with approximately 32,000 to 36,000 reports annually involving approximately 47,000 to 51,000 children (Ledden, 2011). However, the cases have become complex so that workers require more resources such as time to address them. According to results of the 2004 American Public Human Services Association (APHSA) survey, high caseloads or workloads are among the top reasons for preventable turnover in state child welfare administrators (DePanfilis & Zlotnik, 2008). A "preventable turnover" is defined as a staff person leaving the child welfare agency for reasons other than retirement, death, marriage/parenting, returning to school, or spousal job move (Cyphers, 2005, p. 24).

also accountable (B. D. Smith & Donovan, 2003). One says, "Why spend the child's time and taxpayers' money and all of our time and, you know, waste our time on these parents who are never gonna do anything and everybody knows that?" (B. D. Smith & Donovan, 2003, p. 551). So, family reunification rates may remain low. Are caseworkers not accountable in terms of performance? Subsequent to case-related time and complex accountability demands, child welfare workers responsible for family reunification tend to circumvent essential but time-consuming engagement with parents (B. D. Smith & Donovan, 2003), thereby resulting in accountability problems.

This dissertation studies these problems of accountability and performance. In particular, I study the influence of accountability upon performance. I hypothesize that accountability management is an intervening variable between accountability and performance. I am attempting to learn how child welfare caseworkers in Virginia define accountability and performance and act upon these concepts. The reason that my scope is child welfare services rather than a specific program such as CPS is that the programs in the child welfare system are closely connected to each other (see Appendix A), and in terms of accountability and performance the job characteristics are similar.[23] As I discussed above, Virginia's welfare program seems a good case for the study of the relationship between accountability and performance and of how caseworkers manage conflicting accountability demands. Specific justification for case selection is provided in Chapter 3.

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[23] The scope of the study was decided based on information from informal conversation with several child welfare workers in Virginia. As shown in the later ANOVA analysis (Appendix L), there is no variation in the different jobs' effects.

1.4. Research Questions

Prior to examining the impact of accountability on performance and the operation of accountability management, the concepts of accountability and performance as well as the strategy of accountability management in the context must be identified, since the understanding and the use of terms are subject to policy and organizational settings. As I have argued, I distinguished accountability and performance as different dimensions of public management. This study seeks to identify the overlapping or disparate meanings of accountability and performance found in child welfare services. It also attempts to figure out how caseworkers manage conflicting accountability requirements (Phase 1). This qualitative work itself is informative since we little know about what constitutes accountability and performance in practice.

This study next examines whether and how front line workers' views of accountability and their perceptions of work performance are related in a child welfare program. Accountability can be divided into two types, formal and informal. If each type of accountability is related to work performance, another important question becomes whether and how they affect government work performance differently. In this link of accountability with performance, this study examined how child welfare caseworker's accountability management mediates the link (Phase 2). Accountability management is positioned between accountability and performance as an intervening variable, hence I propose the accountability-management-performance (AMP) model (see Figure 1 above). This logic is inspired by Dubnick (2005) and Yang (2012). The combination of Dubnick's conceptual link and Yang's observation of a lack of discussion regarding the relationship between A and P inspired this study to further investigate how accountability influences managerial actions and, in turn, public work performance. The study

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proceeded in two phases to answer two set of questions. All inquiries were based on child caseworkers' perceptions and reports of their values, work, and strategies.

Phase One:
- *How do child welfare caseworkers define accountability and performance?*
- *How do they deal with conflicting accountability requirements in their daily work?*

Phase Two:
- *How does accountability affect performance in the child welfare services in Virginia?*
- *Does accountability management (managing accountability) matter between accountability and performance?*

As seen in the former section, CPS workers are primarily accountable for ensuring the initial and ongoing safety of children identified as being at low to very high risk of current or future abuse and neglect. Also, CPS workers may be held accountable for preserving families. CPS caseworkers have to manage these conflicting accountability dimensions because they may matter to work performance. So, does accountability management result in different performance?

Using insights from the literature, I generated several hypotheses. To test these hypotheses, a multi-method approach (Creswell, 2009) was used to collect data from interviews and surveys with child welfare caseworkers from five regions (Central, Eastern, Northern, Piedmont, and Western) in Virginia. The purpose for conducting interviews prior to administering the survey was twofold: *getting caseworkers' own concepts, knowledge and context; developing and refining the survey instrument*. I obtained 36 caseworkers' interview data via a Web based survey. Also, a large-*N* survey data set was formulated. The population in the survey was all

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child welfare caseworkers in Virginia.[24] A *completed* sample size (Dillman, Smyth, & Christian, 2009) of 200 caseworkers is recommended for sufficient power and for the desired level of precision.[25] Having considered the not too large population to be studied and the low expected response rates, the Web survey link was distributed to all child welfare caseworkers. As a result, the survey yielded 155 completed responses.

Content analysis was used to analyze the interview transcripts. Structural equation modeling (SEM) was employed to analyze the differential impacts of formal and informal accountability requirements on employees' perceived work performance and to examine the mediating role of accountability management. Due to the existence of few quantitative studies of accountability relationships at the individual level (S. E. Kim & Lee, 2010, p. 101; Yang, 2012, p. 5), empirical exploration based on surveys as well as interviews contributes to a more accurate picture of accountability, performance, and accountability management.

1.5. Significance of the Study and Overview

This dissertation aims to further our understanding of accountability and performance as different dimensions of public management. It also seeks to identify accountability management through purposive and strategic activities at the street-level and their relations with perceived accountability and perceived work performance. Thus, the study provides significant contributions to the theory and practice.

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[24] According to the locality staffing report (as of October 2012), there were approximately 2,259 employees in filled child welfare caseworker positions (grade levels I through IV) plus 407 employees in manager or supervisory positions in Virginia Department of Social Services (VDSS). Not all of these positions are full-time, and there may be other employees who work in child welfare but were left off the total counts (This information was obtained from a VDSS IRB staff).

[25] As the sample size increases, the precision of statistical tests increases and thus statistical power increase as well until enough respondents (e.g., 500~800) are added (Land & Zheng, 2010).

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First of all, this study helps to map out what constitutes accountability and performance respectively. Although the literature uses these terms interchangeably, I identify the differences as well as similarities between accountability and performance. As mentioned earlier, child welfare program has diverse aspects of accountability and performance when delivering the services. Making the dimension of both terms explicit will provide insight about performance management. For example, when child welfare caseworkers are required to improve work performance but it conflicts with one of the accountability dimensions, accountability system should be redesigned. It is true that differentiating accountability from performance might not make sense and be hard to implement in practice but it offers a conceptual insight about the way how we design performance management for better service provision.

This study, secondly and most importantly, helps to fill the extant gap in empirical research on the A→P link and contributes to the public management literature. As many scholars have noted, accountability as an independent variable is an important research area linked to good governance and performance (Lynn et al., 2000; Lynn, Heinrich, & Hill, 2001). Yet, we have somewhat a mixed result of the A→P link. While traditionally bureaucratic values or hierarchical approaches play a role in determining how bureaucrats implement policy (Lipsky, 2010; Maynard-Moody & Musheno, 2003), caseworkers who are trained as social workers are likely to respond more positively to accountability expectations that flow out of their training and sense of professional norms (Paddock, 2003, p. 129). It is not hard to observe that informal accountability increasingly is understood as an important accountability mechanism in street-level bureaucracy (Romzek, LeRoux, Johnston, Kempf, & Piatak, 2012). Accordingly, this study will shed light on the role of formal and informal accountability and may provide empirical evidence of whether informal accountability is more important than formal.

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Third, accountability management is rarely studied so we have little knowledge about how public workers manage their accountability requirements. This study of accountability management has implications for how practitioners should act in the face of accountability requirements. Although practitioners have known what they should do to achieve better performance, knowledge of accountability has been an area that is rarely acknowledged as important for performance. Moreover, this study will offer implications for managers at the street-level about the importance of front-line workers' accountability management in the social service delivery. Supervisors may use the study results when they have to understand how managing accountability at the street-level matters when considering work performance.

This dissertation is structured as follows. In this chapter, I reviewed the problem and the gap in the accountability scholarship, and discussed the policy and organizational context of child welfare services that I studied. Next, I presented my research question and explained the contributions this study might offer. In Chapter 2, I review the existing scholarly literature on accountability, performance, and street-level bureaucracy. After dealing with concepts, frameworks, and dimensions, I discuss the scholarship related to the accountability-performance link and accountability management. After this review, I present three hypotheses to be tested. Chapter 3 includes the justification for my case selection and introduces each phase of the study design, interviews and surveys. In phase two of the study design, I introduce the conceptual and analytical framework of this study and describe how I measured the variables, followed by how I collect and analyze the data. The limitations of the study are also discussed. In Chapters 4 and 5, I report the findings of the study and discuss their meaning and importance. Specifically, Chapter 4 identifies what constitutes accountability and performance using interview data, whereas Chapter 5 examines how accountability impacts performance using survey data that tests

hypotheses. In addition, the mediating effects of accountability management are investigated. Finally, in Chapter 6, I summarize the main findings and explain how the results and conclusions of this study are important and how they influence our understanding of the problem being examined. The dissertation ends with suggestions for further research and concluding remarks.

CHAPTER 2. LITERATURE REVIEW

This chapter reviews the scholarly literature on accountability and performance as well as the theory of street-level bureaucracy. All these academic efforts are mainly about how to understand complex organizational behavior and consequences. Organizational relationships (accountability), organizational consequences (performance), and organizational behaviors (street-level theory) are collectively discussed. They overlap and inform one another.

First, I review and define the concepts of accountability and performance, and elaborate how I understand these at the street-level. Then I discuss formal and informal accountability, which constitute accountability mechanisms. Second, I review the literature on the link between accountability and performance, and explain why the study of the relationship between these has been slow to develop. Afterwards, I explore the increased focus on accountability as an independent variable with the changed emphasis from compliance and control to managing accountability. Third, I present how I formulate the concept of accountability management to better understand the A→P link. I also discuss what the accountability management is through a strategic perspective. Throughout the literature review, several hypotheses are developed and offered to guide the empirical part of investigation.

2.1. Conceptualization

2.1.1. The Concepts

A key definition of accountability is "a social relationship in which an actor feels an obligation to explain and to justify his or her conducts to some significant other" (Bovens, 2005,

p. 84). Accountability can also be defined differently based upon social, political, cultural and institutional conditions (Dubnick & Frederickson, 2011a). In order to explain and to justify their conduct, public organizations release information about their actions to the public. Thus, accountability is often seen as "transparency" of information. This dissertation adopts the concept of accountability as managing and meeting public and other expectations for performance and for bureaucratic, legal, professional, and political responsiveness (Kearns, 1996; Romzek & Dubnick, 1987).

In addition to definitions of the concept, a variety of accountability frameworks for understanding accountability and its relationships has developed (Brandsma & Schillemans, 2013; Kearns, 1994; Koppell, 2005; Romzek & Dubnick, 1987). The majority talk about a conflicting nature of accountability to which managers have to respond (Schillemans & Bovens, 2011). The important implication is not *solving* the tension inherent in the need to address conflicting expectations but rather *managing* to "fulfill the public's expectations" (Cooper, 1996, p. 604), which provides a more "realistic picture" of today's organizations and their environments (Acar, Guo, & Yang, 2008). Romzek and Dubnick's model is useful as a framework for understanding and to measuring accountability reflecting this implication. Their four accountability schemes are:

1. Bureaucratic/hierarchical accountability, in which administrators' behavior is tightly controlled by superiors within an organization;
2. Legal accountability, in which administrators' and agencies' behavior is closely controlled by legally empowered external principals, such as legislators;
3. Professional accountability, in which technically expert administrators are expected to exercise considerable discretion, guided by shared professional norms and standards; and
4. Political accountability, in which administrators and agencies are expected to employ their judgment in responding directly to the expectations of the individuals or groups comprising the agency's political constituencies (Justice & Miller, 2011, p. 316).

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Koppell's (2005) concept of accountability is also helpful. Koppell operates with five dimensions of accountability in order to reflect multiple characteristics of accountability: transparency, liability, controllability, responsibility, and responsiveness (see Table 1). This more or less covers the comprehensive meaning of accountability mentioned by the scholars defining the concept. The five dimensions of accountability are made to accommodate Romzek and Dubnick's idea of managing the expectations and environment. The first two kinds of accountability (transparency and liability) can be thought of as foundations that underpin accountability in all of its manifestations. There is greater tension between the three substantive conceptions of accountability—controllability, responsibility, and responsiveness (Koppell, 2008).

Table 1: Koppell's Concept of Accountability

Conception of accountability	Key determination
Transparency	Did the organization reveal the facts of its performance?
Liability	Did the organization face consequences for its performance?
Controllability	Did the organization do what the principal (e.g., Congress, president) desired?
Responsibility	Did the organization follow the rules?
Responsiveness	Did the organization fulfill the substantive expectation (demand/need)?

Bovens, Schillemans, and 't Hart (2008) formulate a comparable set of perspectives on public accountability in a constitutional democratic state with the three criteria of public accountability: information, debate and consequence. The democratic perspective stresses the importance of control by citizen's elected representatives. Secondly, the constitutional perspective aims at the prevention of corruption and abuse of power. Public accountability

should withstand the constant tendency toward concentration and abuse of power. Lastly, the learning perspective should enhance government effectiveness. Public accountability provides feedback to increase effectiveness and efficiency. Theories or frameworks show that public accountability represents many dimensions of the proper functioning of the government and a democratic society.

We have observed multiple dimensions of accountability in the literature. What constitutes performance? Understanding and measuring of performance is also not easy as much as accountability since organizations vary in how well they perform. Performance[26] is generally defined as "the achievements of public programs and organizations in terms of the outputs and outcomes that they produce" (O'Toole Jr. & Meier, 2011, p. 2). In this study, performance is defined as whether resources have been used in the intended way in order to achieve efficiency, effectiveness, and fairness (Brewer & Selden, 2000; Halachmi, 2002a, p. 371).

Although it is difficult to draw a conclusion on what does or does not work to enhance performance, the effort of scholars to identify the most influential factors and dimensions of performance continues. A variety of studies have examined the factors for better performance. Among those, Rainey and Steinbauer (1999) propose a theory of effective government organizations that includes the relations with internal and external stakeholders, autonomy, mission valence, organizational culture, leadership, task design, technology and developed human resources, professionalism, and motivation. Brewer and Selden (2000) conducted an empirical study with data from the 1996 Merit Principles Survey and confirmed most hypothesized relationships in the theoretical model of organizational performance.

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[26] As a similar metaphor, *organizational effectiveness*, according to a theory of effective government organization, refers to "whether the agency does well that which it is supposed to do, whether people in the agency work hard and well, whether the actions and procedures of the agency and its members are well suited to achieving its mission and whether the agency actually achieves its mission" (Rainey & Steinbauer, 1999, p. 13).

There is a lack of consensus as to what constitutes a valid set of organizational performance and organizational effectiveness criteria (Ostroff, 1992). Boyne (2002) has identified several key dimensions of service performance: *quantity and quality of outputs, efficiency, equity (fairness), outcomes, value for money, and consumer satisfaction*. Brewer and Selden (2000) present values that should be included in organizational performance measurement: *efficiency, effectiveness, and fairness* in internal and external dimensions (3×2 typology) (p. 689). Where previous research has tended to focus on efficiency-related measures of performance, Brewer and Selden's taxonomy captures additional dimensions of public organizational performance. Public administration scholars have recently begun to regard these as the most important dimensions of public service performance (see Brewer, 2006). The dimensions of organizational performance in the public sector can be divided into internal and external performance, and each specifies the following performance-related values: efficiency, effectiveness, and fairness (equity). Efficiency usually means input/output rations; effectiveness refers to a level of service goal achievement; fairness indicates distributing services evenly to all stakeholders (Andrews & Entwistle, 2010).

Measurement of performance typically is done at three levels: the individual, the program, and the organizational level (Boschken, 1994). This study measured the concept of accountability and work performance through individual caseworkers' perceptions of their program since the performance of child welfare agencies is driven by the work of caseworkers (Casey Family Programs, 2011). Although the frames discussed above (Romzek & Dubnick's and Brewer and Selden's) were used as a basis to construct perceptual measures of accountability and work performance, this study developed its own items based on qualitative interview data in order to capture more accurate perceptions of child welfare caseworkers. This also helps that

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survey participants be familiar with the language used in the survey instrument. When analyzing interview data and developing a survey instrument, Romzek and Dubnick's (1998) framework of accountability guided questions about accountability and Brewer and Selden's (2000) dimension of performance helped tap performance in child welfare services.

2.1.2. Accountability and Performance at the Street-level

The term "street-level bureaucracy" refers to front line service delivery (workers) in hierarchical organizations. Discretion[27] may be inherent in the tasks they perform (Lipsky, 2010); there are many rules, but street-level bureaucracy is not rule bound (Maynard-Moody & Musheno, 2003). Street-level workers work under the redundancy of rules which guide caseworkers' decision making. Yet, at the same time they make decisions without supervisory input all of the time.

For example, the CPS program in Virginia requires that caseworkers observe the Virginia Children's Service Practice Model which guides decision making and encourages caseworkers to improve services for children and families. This is done by implementing evidence-based practices, utilizing the most accurate and current data available, and focusing upon improving the safety and well-being of children and families. In addition, caseworkers must utilize the Structured Decision Making (SDM) process which was implemented approximately two years ago in Virginia. Nonetheless, they may be not bound by rules to make effective and reliable decisions. Street-level work lies between the responsiveness to political goals and the individual's judgment (Lipsky, 2010). Hence, the specific characteristics of the accountability

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[27] According to Webster Dictionary, it means "the quality of having or showing discernment or good judgment, ability to make responsible decisions." Street-level bureaucratic discretion can be understood by the case workers' role of making policy with respect to aspects of their interactions with citizens (Lipsky, 2010, p. 13).

demands that street-level workers experience may be somewhat different from the accountability demands facing general public managers.

Accountability and performance at the street-level are exposed in CPS's statement of its goals. The goals of CPS program are to "identify, assess and provide services to children and families in an effort to protect children, preserve families, whenever possible, and prevent further maltreatment."[28] As street-level activities have a multi-dimensional web of relationships (Hupe & Hill, 2007), accountability for street-level workers is multi-faceted due to conflicting goals and mandates imposed upon them by their own organizations, systemic rules, procedures, as well as those of their clients.[29] For instance, while CPS programs aim to protect the child, it is not clear whether that is best accomplished by removing the child from the home or working with the family to improve family life. This is well described by Lipsky (2010), who recognizes that street-level work is deeply conflicted, confronting its practitioners with 'the dilemmas of the individual in public services.'

Street-level studies emphasize the improvement of service through satisfying clients. Caseworkers' ultimate allegiance and sense of accountability is to the client (Romzek, LeRoux, Johnston, et al., 2012). Yet, acting as "citizen-agents" may conflict with other demands (Maynard-Moody & Musheno, 2003, 2012). Citizen-agents, rather than "state-agents," base their judgments on the individual citizen-clients' worth (Maynard-Moody & Musheno, 2000).[30] Thus, accountability at the street-level (including CPS programs) requires managing and meeting

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[28] Virginia Department of Social Services (http://www.dss.virginia.gov/family/cps/index2.cgi)

[29] Accountability to children (for assuring accurate needs assessment and appropriate service plans), to parents (for assuring their participation in service plans), to courts (for assuring that they have adequate information to make decisions and fulfill their check-and-balance responsibility), and to funding agencies (O'Donnell, 1992, p. 262).

[30] The state-agents apply the state's laws, rules, and procedures to the cases they handle (see Chaper 2 in Maynard-Moody & Musheno, 2003). That is, front line workers use discretion to match behavior to law.

public and other expectations for performance and responsiveness while balancing between the rule of law (compliance) and discretion in their practice.

Performance at the street-level, in particular at the CPS program, covers the number of children in foster care because of abuse or neglect and the rates of child abuse or neglect (D. S. Kim, 2011, p. 26). Virginia welfare agencies strive to improve performance. As part of the Federal CFSR, VDSS has coordinated the Virginia Child and Family Services Plan (CFSP)[31] with the CFSR and subsequent program improvement plan (PIP) in order to improve the child welfare system in the State. VDSS illustrates *accountability* as maintaining "an organization and network that are both effective and good stewards of public funds and trust" and also *effectiveness* as striving to "maximize our resources and effectively meet the changing needs of our customers."[32]

However, studies of street-level performance indicate that performance measurement creates powerful inducements to focus on measured dimensions of work; when time and resources are limited, attention to unmeasured aspects of performance are likely to be displaced (Brodkin, 2012). For instance, caseworkers tend to be in constant contact with the child-client and family, and with other policy providers. Accordingly, performance measures based on the number of child abuse and neglect hardly cover the qualitative aspect of their performance. One case manager describes her process for keeping focus on the client's needs: "here is the kid, here is us. Our whole reason for being around the table is this kid, so as long as we can keep focused on that, everyone has their job to do and their guidelines. …"(Romzek, LeRoux, Johnston, et al.,

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[31] The Virginia Child and Family Service Plan (CFSP) is the 5-year strategic plan required by the federal government for fiscal years 2010 through 2014. It provides the vision, outcomes and goals for transforming and strengthening Virginia's child welfare system.
[32] http://vaperforms.virginia.gov/agencylevel/stratplan/spReport.cfm?AgencyCode=765

2012, p. 14). Three decades ago, Lipsky (1980) had cautioned that performance in social services may be too complex to reduce to quantifiable measures.

With respect to this dynamic nature of accountability and performance, this study's investigation of the characteristics of accountability and performance through interviews will add knowledge on the existing literature and the practice.

2.1.3. Formal and Informal Accountability

In the first section of Chapter 2, I illuminated the concept of accountability, how I understood it, and how I employed it to analyze interview data and to develop a survey instrument. This section discussed accountability further in terms of formal and informal types, which may influence performance differently. Raelin (2011) defines formal accountability as a bureaucratic mechanism and informal accountability as a post-bureaucratic process through norms and trust. Formal accountability lies with the organizational structure and institution while informal accountability emerges from the unofficial expectations and discretionary behaviors. This distinction is important because accountability could be either a problem (Koppell, 2005) or an opportunity for performance (Wilson, 1989) depending on the emphasis of either accountability mechanism.

Since the Friedrich-Finer debate[33] in 1940s, a literature discussing the impact of the internal and external[34] environment over the bureaucratic behavior has developed. A number of scholars have concluded that the integration of individual practice and organizational environment is crucial in managing accountability in public organizations (Burke, 1986; Cooper,

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[33] Friedrich (1940) advocated a robust exercise of expert professional judgment/discretion; Finer (1941), by contrast, argued for obedience/responsiveness to explicit instructions.
[34] The terms 'internal' and 'external' are respectively compatible with 'informal' or 'implicit,' and 'formal' or 'explicit.'

2012). Cooper (2012, p. 163) argues that the full responsibility of public managers must derive from a balance between internal and external control. Similarly, Mulgan (2000) contends that both internal and external factors should be considered as a single mechanism to understand why public servants decide and behave as they do. In short, it has become common knowledge that public managers do not just passively respond to external pressures but they make judgments about what is the best for citizens. Bovens (2010) recently suggested two ways of thinking about accountability: as a mechanism (formal) and as a virtue (informal). This perspective summarizes effectively this architecture of accountability. Bovens argues that these are not contradictory but complementary (p. 962). As such, most students studying accountability seem to agree that the crucial theme of managing accountability is balancing between formal (responsiveness to explicit instructions or mechanism) and informal (bureaucratic professionalism and discretion or virtue) accountability.

While the traditional perspective on bureaucratic behavior has largely assumed that bureaucratic decisions, outputs, and outcomes are determined by external political controls (Krause, 1999; Meier & O'Toole Jr., 2006), the 'balance' perspective mentioned above gets support. Recent studies have demonstrated that bureaucratic values are as or even more important in explaining bureaucratic decision and behavior than external factors and show more the role of informal accountability (Meier & O'Toole Jr., 2006; Yang & Pandey, 2007). For example, Dunn and Legge Jr. (2001) found empirically that managers in local governments identify responsibility and accountability as a combination of internal and external controls, yet internal controls are slightly stronger factors than external ones. Reflecting this trend, the study of the significance of informal accountability in management rises to the surface (Romzek, LeRoux, & Blackmar, 2012). Romzek, LeRoux, and Blackmar (2012) argue that informal

dynamics are far less understood. Much literature on street-level bureaucracy also focuses on informal factors, such as organizational norms and worker attitudes, as powerful factors explaining behavior and performance (Meyers & Vorsanger, 2003).

2.2. Accountability and Performance

Previously, I focused on the concepts of accountability and performance separately and discussed on the formal and informal aspects of accountability. This section shifted to focus on the literature regarding the accountability-performance link. I then discussed the literature in which increasingly focuses on accountability along with the transition of accountability studies. This literature shows several points of view. For some scholars, accountability and performance improvement are instrumental to each other (Dubnick, 2005), which means one variable can enhance the other. Another strongly held position is that there are the tensions between accountability and performance due to incompatibility with each other (Behn, 2001; Halachmi, 2002a). The tensions between the requirements of accountability and those of effective administrative action have been described as one of the classic dilemmas of public administration (Barberis, 1998; Behn, 2001; Bovens, 1998; Deleon, 1998).

Prior to examining the A→P link, I briefly illuminate the P→A link. Evaluation efforts in the government have a long history. Performance measurement has been viewed as "the newest method of ensuring accountability"(Zimmermann & Stevens, 2006, p. 315). Ho (2006) and Berman and Wang (2002) suggest that performance measurement leads to a perceived accountability improvement of government agencies. Yet, whether performance measurement matters is still elusive (Amirkhanyan, 2011). The problem, as the introduction briefly discussed, is that performance management rarely covers the genuine scope of accountability. It is common

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that performance management efforts have always been driven primarily by political accountability purposes (Yang, 2011, p. 152) and measures often have focused on outputs rather than outcomes that matter to citizens (Hatry, 2006). Furthermore, the scope of performance, I argue, is not as broad as accountability in terms of its conceptual scope (Radin, 2011). Hence, performance efforts explain only a small part of the enhancement of accountability. Conversely, a study of accountability as an independent variable can help capture a more accurate picture for improving the quality of public service provision.

2.2.1. Accountability → Performance

Some believe that through greater accountability we will enhance the government's performance (Dubnick & Frederickson, 2011b). In other words, accountable workers are expected to yield better productivity. Regarding the effect of accountability on performance (Halachmi, 2002a, 2002b), there has been little significant contestation and debate concerning this relationship because it is rarely challenged (Behn, 2001; Dubnick, 2005, p. 379). The exception is Gormley & Balla's (2010) inquiry into how the dynamic of accountability has influenced varied performance of public agencies.[35] Empirical studies have identified several positive effects of accountability (Bouckaert & Halligan, 2008). Nevertheless, it is not yet understood when and which accountability mechanisms lead to these (un)desired behaviors (Ossege, 2012).

Some show that the lack of accountability can lead to disasters (Romzek & Ingraham, 2000). Others worry that accountability causes management problems (Koppell, 2005), and

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[35] They have attempted to evaluate accountability and performance of particular public agencies through systematic analysis using a theoretical framework of bounded rationality, principal-agent theory, interest group mobilization and network theory. The relationships are threefold: the parallel relation, the effect of accountability on performance, and the effect of performance on accountability.

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hinder policy change (Schwartz & Sulitzeanu-Kenan, 2004). The main reason for skepticism about accountability is its multifaceted, often self-contradictory nature. Bovens (2005) notes how other scholars such as Behn (2001) and Dubnick (2003) are of the opinion that "public services nowadays have far too many accountability arrangements for efficient performance." For example, accountability imposes competing pressures on employees' perceptions of their work performance, which can reduce the probability of actual mission accomplishment in an agency (S. E. Kim & Lee, 2010, p. 101). Ebrahim (2005) asserts that it is generally assumed that more accountability is better but, he goes on to argue, having more accountability arrangements in place does not ensure better performance because too many arrangements to ensure accountability can prevent organizations from achieving their missions (p. 56).

Hence, one significant reason for the slow progress in our understanding of the effects of accountability on performance may be the paradoxical reality of accountability when studying the effect of accountability on performance (Harmon, 1995). While the concept of accountability has been rallied to serve the needs of highly desirable objectives (Dubnick, 2005, p. 379), a number of scholars have discovered a dilemma[36] or tension in accountability systems, the so called "accountability dilemma."[37] That is an undesirable effect of accountability and other forms of control. P. Smith (1995), for example, observes the tendency of civil servants to engage in tunnel vision. Tunnel vision makes individuals focus on specific issues accounted for while

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[36] The term dilemma has been used interchangeably with "paradox" as well as "accountability crisis" (Bovens, 2010; Dowdle, 2006), and also an 'accountability trap' (Van Thiel & Leeuw, 2002). Koppell (2005, p. 95) calls these complex accountability phenomenon as "multiple accountabilities disorder (MAD)" and D. F. Thompson (1980, p. 74) names it as "The Problem of Many Hands" as policies pass and decision made through various committees and hierarchy before they were actually implemented.

[37] So far, scholars have suggested a few ways to reconcile these complex phenomena: deliberation (DeHaven-Smith & Jenne II, 2006); mutual accountability (Whitaker, Altman-Sauer, & Henderson, 2004); dialogue (Roberts, 2002); negotiation (Kearns, 1994). Morrison and Salipante (2007) suggest "broadened accountability" emphasizing negotiable accountability by the combination of deliberate and emergent strategizing. Moreover, Aucoin and Heintzman (2000) argue that attending to the accountability "dialectics" are needed for the balance of different purposes of accountability.

not considering the broader, unaccounted dimension of equal importance (Van Thiel & Leeuw, 2002). Gaming behavior, such as 'hitting the target but missing the point' (Bevan & Hood, 2006, p. 521), is also an undesired behavior frequently observed in public organizations. Public servants intend to please the accountability stakeholders and avoid sanctions by shifting their own attitudes to preferences of the accountability stakeholders, thereby potentially undermining the purpose of accountability.

This is in line with the classic debate between responsiveness and neutral competence (West, 2005). Self (1973, p. 284) comments that "the growth of specialized policy fields and the increase of administrative discretion [have] reduced the decision-making capacity of elected political leadership." As well as in theory, in practice the tension between expertise and obedience to political instructions is explicit (Jos & Tompkins, 2004). Empirical studies show that emphasis on legal and hierarchical accountability damages professional and political accountability (S. E. Kim, 2005). Also, focusing on political and hierarchical accountability damages professional accountability (Romzek & Dubnick, 1987; Romzek & Ingraham, 2000). This phenomenon is well fit into the insight from the theory of street-level bureaucracy that recognizes 'the dilemmas of the individual in public services' (Lipsky, 2010). For instance, street-level research on child welfare services shows the perverse effects of performance-based accountability approaches (Brodkin, 2008, p. 324).

This conundrum was well expressed in the literature of formal and informal accountability. As I discussed in section 2.1.3, challenge is the art of balance between formal and informal accountability systems. While there has been a certain amount of emphasis on both accountability arrangements in theory as well as in practice, informal accountability is getting more attention in public service. As this dissertation empirically tests the relative significance of

formal and informal accountability in child welfare context, the results will provide further implications.

This dissertation examines the role of formal and informal accountability. Street-level organizations have dynamics of these roles.[38] Formal policy terms and managerial strategies surely matter but they cannot fully determine what happens on the front lines of policy delivery. From a Romzek-Dubnick framework, formal accountability represents political, legal, and bureaucratic accountability, whereas informal represents professional (ethical) accountability.

2.2.2. Reconsideration of Accountability for Performance

Since few studies have been conducted to examine the role of accountability in a relationship with other public values or objectives (Dubnick, 2005; Yang, 2012), the effect of accountability on performance remains to be explored (Dubnick, 2005; O'Connell, 2006; Yang, 2012). In order to go beyond the inherent circumstances—the competing nature of accountability—discussed above, Acar et al. (2008) argue that "the accountability-performance link may have something to do with how managers respond to accountability pressures and transform the pressures into *management strategies*" (p. 17, emphasis added). This perspective supports the increased attention to accountability.

The increased focus on accountability as an independent variable and relationship with performance (Joaquin & Greitens, 2011; Kassel, 2008) is attributable to the transition of accountability studies. The discussion of accountability has been changed from the traditional concept of *control*, which is simply giving an account after the event, to the concept of *strategic responsiveness*. As Forrer, Kee, Newcomer, and Boyer (2010) posit, public accountability

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[38] Maynard-Moody and Musheno (2003) discuss the dynamics of formal and informal aspects in terms of "legal abidance" versus "cultural abidance." See Chapter 2 in the book.

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historically has been largely about "control" because representation is up to elected representatives (such as members of the legislature or the president) to ensure that administrators serve the needs of the people (p. 477). However, "control" is too strong a term for the accountability relationship (Meier & O'Toole Jr., 2006, p. 188) when the bureaucracy has become an important component of good governance (Bovens, 2007) as the administrative state developed (Waldo, 1984). According to Romzek and Dubnick (1987), beyond the concept of control, the strategic approach focused on how public administrators manage the diverse expectations and respond to constituents have received more attention. Acar et al. (2008) summarize effectively these two different languages:

> The AA (accountability as answerability) approach relies on public managers' compliance with rules and elected officials' preferences, the AME (accountability as managing expectations) approach envisions or at least allows for a bigger role for public managers to *identify, define, and manage* diverse expectations placed on the organizations by internal and external stakeholders. (p.6, emphasis added)

After the introduction of 'managing expectations,' the most pressing question in the accountability research is: how do public managers deal with conflicting accountability pressures? (Posner, 2002; Romzek & Dubnick, 1987) This notion is questioned continuously by many scholars; yet the answer is still unclear (Yang, 2012).

While the conflicting nature of general accountability may produce negative effects, both formal and informal accountability mechanisms are crucial in the context of child welfare. As discussed, however, informal accountability demands will constitute the majority of child welfare caseworkers' practice for performance compared to formal accountability with assuming that both formal and informal accountability will affect performance in a positive way. In terms of the impact of accountability on performance in the AMP model, hypotheses are:

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H1: Perceived formal accountability requirements weakly improve perceived work performance.
H2: Perceived informal accountability requirements strongly improve perceived work performance.

These hypotheses allow this study to examine the first research question of phase 2 of the study:

How does accountability affect performance in the child welfare services in Virginia?

2.3. Accountability Management

Accountability is usually understood as a system to be established since it is all about relations. This perspective is anchored on accountability's role. Rather than looking at accountability itself, this study suggests focusing upon the point of public workers' role in managing accountability—'accountability management.' As discussed in the previous sections, managing accountability requirements is up to public managers or caseworkers in this study.

In this section, I explain how I built the concept of accountability management from a strategic perspective which emphasizes the role of active participation in organizational and policy environments beyond passive compliance. I then discuss accountability management strategies.

2.3.1. Forming the Concept of Accountability Management

Accountability management by public workers involves identifying, defining, and managing diverse expectations placed upon organizations and workers within them by internal and external stakeholders. Considine (2002) denotes accountability management as "the appropriate exercise of a navigational competence: that is, the proper use of authority to range freely across a multi-relationship terrain in search of the most advantageous path to success" (p.

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22). The idea of accountability management stems from the premise that public agencies and their workers manage the diverse accountability expectations generated within and outside their organizations (Romzek & Dubnick, 1987). As Dubnick and Romzek (1993) write, "a central fact in the world of public administrators is the need to deal with expectations, no matter what their source" (p. 47).

In order to address multiple and competing expectations, bureaucracy has its own discretion with respect to behavior not determined by legislature (Wilson, 1989), which implies "purposive behavior" (Simon, 1997, p. 359). As Simon (1997) describes, purposive behavior indicates deliberate behavior based on actors' knowledge and experience. Bureaucracy has 'rational' features such as rules, means, and ends (M. Weber, 1991, p. 244). Since Weber, there has been an attention toward rational administration (Stinchcombe, 1959, p. 183), which is now defined as professionalization. Mosher's (1982) thoughtful formulation illustrates professionalization like this: "Our dependence upon professionals is now so great that the orientations, value systems, and ethics which they bring to their work and which they enforce on one another are a matter of prime concern to those who would strengthen the democratic system" (p. 12). As the bureaucracy emerged as a policymaking force to tackle complex issues, Friedrich's emphasis on a professional public service has prevailed in most Western democracies (Jackson, 2009, p. 74).

This accountability management perspective, which is based on the concept of managing expectations, purposive behavior, and professionalization as discussed in the above paragraph, can be supported by the theory of street-level bureaucracy which argues that discretion motivates the street-level workers (Lipsky, 1980, 2010). As seen in the changed nature of accountability, how to manage accountability expectations became a crucial part of rational professionalism in

bureaucracy. As Friedrich (1940, p. 10) recognizes, bureaucracy exists to deal with needs identified by political process and the challenge is to make those functions effective, not to take power away from administrators for fear of them making mistakes or doing wrong (Jackson, 2009, p. 72). Hence, worker's capacity to deal with the accountability demands is expected to help the development of the environment where accountability can lead to a performance improvement (McDermott, 2011).

The accountability management perspective can be understood and operationalized by a strategic perspective. As Kearns (1994) observes, accountability management involves an element of strategy in which "management attempts to forecast diverse expectations and to position their agency for proactive as well as reactive responses" (p. 187). Applying this strategic management perspective in accountability management is constructive since scholars need to develop a strategy for how public managers can better manage thoughtfully and appropriately in particular contexts, when it is observed that overreliance on a particular type of accountability generates problems (Romzek & Ingraham, 2000; Schwartz & Sulitzeanu-Kenan, 2004). Dubnick and Romzek (1991) refer to accountability as a "strategic approach to the management of expectations." Morrison and Salipante's (2007) "broadened accountability" is considered as a combination of deliberate and emergent strategizing including this strategic perspective on accountability.

The strategic perspective of accountability management cannot be separated from performance.[39] Strategy[40] is the way in which an organization adapts to its environment and

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[39] There is a good deal of public administration research which has focused on the effectiveness of various managerial strategies for improving government performance (e.g., Kettl, Fanaras, Lieb, & Michaels, 2006). For example, total quality management, reengineering, performance budgeting, and privatization are discussed as strategies. This dissertation, however, implies 'managerial strategies' as 'managing expectations'(Dubnick & Romzek, 1993) or 'managing for accountability'(Kearns, 1996) although the analysis considers the causation direction from management to performance.

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pursues improvement in its performance (Walker & Brewer, 2009, p. 426). Strategic

management in public sector can be defined as "the appropriate and reasonable integration of

strategic planning and implementation across an organization (or other entity) in an ongoing way

to enhance the fulfillment of its mission, meeting of mandates, continuous learning, and

sustained creation of public value" (Bryson, 2011). Previously strategy was core discussion in

private sector, yet now it has also become a critical debate in public organizations (Miles &

Snow, 2003).[41] While strategy is geared toward increasing profit, market share, and growth in

the private sector, strategy in the public sector may be centered on increasing organizational

performance, maximizing citizen well-being, ensuring the organization's survival (Bryson,

Berry, & Yang, 2010, p. 510). My conceptualization of strategy in terms of street-level workers'

accountability management is the proper use of discretion and efforts for management of their

accountability environment in search of the most advantageous path to their performance and

public goals. This is similar to Moore's (1995) conception of organizational strategy for the

public sector. The role of the public manager is to engage the changing environment rather than

just expecting that stable harmony will result from competing values.

2.3.2. Strategies of Accountability Management

In the operation of strategy of accountability management, Kearns's (1994) four strategic

behaviors for the analysis of public managers' behavior is helpful. Kearns's typology of four

strategies is *compliance, negotiated, anticipatory, and discretionary strategy*. A compliance

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[40] The term 'strategy' sometimes involves a negative implication in responding to accountability demands. For instance, public workers who are accountable for successful performance may make easy decisions by abandoning difficult jobs. This gaming for performance—trying to look good, hitting the target but missing the point (Bevan & Hood, 2006, p. 521)—is a sort of dysfunction inherent in accountability mechanisms. The meaning of accountability strategy used in this study should be distinguished from the meaning of strategy used in gaming behavior.
[41] The Miles and Snow (2003) framework involves *prospectors, defenders, analyzers*, and *reactors*.

strategy involves adhering to the law. This component follows the rules, subject to oversight and periodic audits or evaluations. A negotiated strategy involves the pressure to respond to the institutions or society. Public managers should consider contingent relationships between the agency and its environment (p. 188). An anticipatory strategy involves anticipating changes. It takes professional responsibility for identifying and interpreting standards of acceptable practice. Lastly, a discretionary strategy involves determining the latitude for discretionary judgment. It shapes and defines the norms and rules that workers believe will eventually be imposed (p.189).

This study, however, paid specific attention to the strategic behavior of child welfare program caseworkers in Virginia. That is, when I measured caseworkers' accountability management, I did not use this generalized frame; instead, I identified their own strategies and developed accountability management question items. Chapter 4 compares Kearns's and child welfare workers' strategies.

While diverse accountability management strategies are expected from the child welfare workers, I hypothesize that the strategies that will be identified through the interviews and survey research will mediate the relationship between accountability and performance. I have already discussed that formal accountability lies on the organizational structure and institution, whereas informal accountability emerges from the unofficial expectations and discretionary behaviors. Based upon the literature, I expected that formal accountability would be related to compliance or negotiated strategies, whereas informal accountability is more likely to be connected to anticipatory or discretionary strategies.

According to an accountability management perspective, which is based on the concepts of managing expectations, purposive behavior, professionalization, and the theory of street-level bureaucracy, worker's capacity to deal with the accountability demands was expected to

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contribute to an environment where accountability can lead to a performance improvement (McDermott, 2011). In short, based upon the discussion, I hypothesize that accountability management plays a mediating[42] role in the A→P link.

H3: Perceived accountability management mediates the relationship between accountability requirements and performance.

Next chapter introduces the research methodology used for this study and how it has guided data collection and analysis.

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[42] "Mediation" is a statistical term. In simple terms, "a mediating effect is created when a third variable/construct intervenes between two other related constructs" (Hair, Black, Babin, & Anderson, 2010, p. 751).

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CHAPTER 3. RESEARCH DESIGN AND METHODLOGY

Much scholarship is devoted to developing an understanding of the nature of accountability and front-line workers' behavior; yet, neglected in the existing scholarly literature are empirical tests of the impact of accountability and accountability management on performance. This dissertation examines the influence of accountability upon performance at the street-level of child welfare in Virginia. Accountability management as an intervening variable between accountability and performance is explored. Prior to examining these empirical relationships, I am attempting to learn how child welfare caseworkers in Virginia define accountability and performance and act upon these concepts. The present research, therefore, attempts to fill the gaps in the literature.

I define *accountability* as managing and meeting public and other expectations for performance and responsiveness; and *performance* as whether resources have been used in the intended way of efficiency, effectiveness, and fairness. *Formal accountability* is an organizational structure and institution while *informal accountability* is about unofficial expectations and discretionary behaviors. *Accountability management* is the proper use of discretion and efforts for management of their accountability environment in search of the most advantageous path to their performance and public goals. I examine the impact that formal and informal accountability have on performance and accountability management's mediating role empirically using mixed methods of sequential design, which has two distinct phases: qualitative (interview) followed by quantitative (survey) study.

- *Phase 1-Interviews (Pilot study): How do Virginia child welfare caseworkers understand accountability and performance? How do they manage accountability?*
- *Phase 2-Survey (Main study): How does accountability affect performance in the child welfare services in Virginia? Does accountability management matter in a relationship between accountability and performance?*

The research design of this dissertation was sequential; the survey was administered once I completed collecting and analyzing the interview data. The reasons that I conducted semi-structured interviews before administering the survey were twofold. The interview questions were not only to offer knowledge, experience, and their context but also to generate information, on the basis of which I could further develop survey items.

The web-based survey as well as the web-based interview is built by *Qualtrics* survey software.[43] All data collection was conducted after the receipt of the research protocol approvals by the institutional review boards (IRBs) of Virginia Tech (see Appendix B) and VDSS (see Appendix C). The interviews and survey instruction outlined the study objectives, requested voluntary participation, and guaranteed anonymity. The interview and survey links were distributed as evenly as possible via email to Central, Eastern, Northern, Piedmont, and Western regions, in order for geographic diversity to allow for the possibility of state institutional context shaping accountability. My survey target population included approximately 2,000 child welfare workers in Virginia. The unit of analysis of the survey was the individual.

The quantitative and qualitative data are produced by having 36 interview participants and having 155 survey respondents. The data collected through interviews are analyzed using

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[43] *Qualtrics* is a Web-based survey software available to all Virginia Tech faculty, staff and students. Available at http://www.etlab.soe.vt.edu/resources.php

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qualitative content analysis;[44] the data collected via a survey are analyzed using explanatory factor analysis (EFA), confirmatory factor analysis (CFA), and structural equation modeling (SEM).

Four main sections, which provide detailed research design and methodology, comprise the remainder of this chapter. Section 3.1 provides a justification for case selection of Virginia child welfare services. Sections 3.2 and 3.3 outline the research designs of this study. While section 3.2 explains how interviews proceeded and content analysis conducted, section 3.3 describes the quantitative framework, the survey development, data collection, survey sampling and a brief overview of the data analyses. Finally, section 3.4 provides the summary of methodology and reviews this study's limitations.

3.1. Justification for Case Selection

In this section, I will justify my case selection and explain how my conceptual model can be linked to this context.

3.1.1. Case Selection: Child Welfare Services

The research design controls for policy arena and state. I study child welfare services provided by the Virginia Department of Social Services (VDSS). Child welfare programs in the Commonwealth of Virginia include Adoption, Child Protective Services (CPS), Family Preservation, Foster Care, and the Interstate Compact on the Placement of Children (ICPC). The selection of Virginia State's social service program as a case study is based on the researcher's ability to access key informants and, for the purpose of control, other political and institutional

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[44] The quotation of interview in this analysis (Chapter 4) depended on verbatim transcripts, which includes misspelled words or typos.

effects through having other states excluded. What Lipsky and others observed was that front-line workers responded to different work conditions with different behavior patterns (Ellis, Davis, & Rummery, 1999; Jewell & Glaser, 2006; Lipsky, 2010). I attempt to understand 'work conditions' from an accountability point of view and 'different behaviors' from an accountability management perspective. In essence, the question is; how do front-line workers view, accept, and undertake their roles and responsibilities? The accountability point of view has become as much an instrument of the social welfare policy as anything else.

Why is this context a good one for empirical research on what I am attempting to study? Why did I choose child welfare as a vehicle for exploring accountability and performance? What makes it a good case for my study? I justify my case selection with several rationales including what I already briefly mentioned about the Virginia child welfare case in Chapter 1. To begin with, Virginia's focus on performance management, the conflicting goals and accountability demands, and the complex nature of child welfare service facing children, families, and their communities provide a ground for studying the accountability and performance link. First, VDSS has recently strived for continuous quality improvement rather than compliance based approaches. For example, the quality review approach of the Division of Family Services is based in a philosophy and practice of continuous quality improvement and is accountable to the principles of the Virginia Children's Services Practice Model.[45] Second, performance and accountability are made very complicated by the conflicting goals in the organization's mission and by the nature of the work done by CPS (complexity, high levels of conflict involved). Third, employees in local departments have many opportunities to be accountable in a diverse way with

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[45] These principles include belief that all children and youth deserve a safe environment; belief in family, child and youth-driven practice; belief that children do best when raised in families; belief that all children and youth need and deserve a permanent family; belief in partnering with other to support child and family success in a system that is family–focused, child-centered and community based; and belief that how we do our work is as important as the work we do (Source: http://www.dss.virginia.gov/files/about/reports/children/qsr/qsr_reviews/qsr_sip.pdf).

their discretion in the field. In particular, the State intrudes into a family in the name of family preservation and therefore, caseworkers are working with the Commonwealth's youngest and most vulnerable citizens. This context raises the issues of the real meaning of accountability and the establishment of the relationship between accountability and performance in this child welfare system.

Furthermore, the street-level field is the area where conflicts and debates of formal and informal accountability are actively rampant since caseworkers make decisions to some degree using their own experience or norms as well as obeying the given state and agency policy (Maynard-Moody & Musheno, 2003). The literature finds that informal accountability is increasingly more important in the street-level work practice (Romzek, LeRoux, & Blackmar, 2012). Hence, I examine how formal and informal accountability play a role in this context. Although caseworkers and supervisors are usually managed by upper level officials, the theory of street-level bureaucracy pays attention to caseworkers' discretion and managerial actions. This means they manage accountability demands in their daily practice for better performance. Accordingly, my study of child welfare in Virginia will offer empirical insights regarding front-line behaviors.

Finally, in general, social policy may be a fairly unique area to study in public management because of the contested goals, ambiguous technology, and diversity of client circumstances (Hasenfeld, 2010). Moreover, social programs include the characteristics of political, subjective, and moral tasks (Brodkin, 1987). This dynamic environment offers a good basis for where the accountability management and the A→P link can be well investigated.

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3.1.2. Linking the Model to Context

So, how can my conceptual model (Figure 1 in Chapter 1) be connected to this context? I provide two examples to justify why child welfare services provides a rich context to gain insight to relationships between accountability, performance, and accountability management.

Firstly, a policy report from Annie E. Casey Foundation describes the State level context:

Despite the best of intentions, deeply committed staff, and significant resources, public child welfare agencies are continually challenged in their efforts to help children and families. The problem, in part, may lie with the multiple masters these systems must serve: The elected, appointed, and judicial officials that shape them; the taxpayers that fund them; the staff members, providers, and community representatives that influence them; and the clients themselves. Faced with the daunting task of improving complex public systems, one approach that can unite these often competing interests is a 'focus on results.' When an agency or a community focuses on results, simple but crucial questions are raised: Are children's needs being met? Are they safe, developing as they should, and living in stable families? Do dollars spent to help children and families elicit benefits? Do families grow stronger having received supports? (see Walters, 2010, p. 1)

I argue that focusing on results is not enough to be trustworthy for better public service provision, as several questions have been raised above. Rather, we need to study the scope and intricacy of accountability for a better understanding of the problems involved. Accountability in the child welfare context refers to accountability requirements imposed by supervisors, the children and families, the state policy, the legislature budget and oversight, the profession, the court decision, and the community. Therefore, caseworkers ought to manage and meet certain expectations from the public and otherwise, for performance and responsiveness.

Secondly, at the local level context, caseworkers in the Virginia child welfare program face different accountability demands and their performance measurement is too complex to reduce to numbers, such as the rate of child abuse and neglect. For example, while guidance pushes caseworkers toward family reunification, caseworkers indicate that parents rarely change and do

not initiate well an effort to be improved. Thus, caseworkers de-prioritize activities with parents but instead increase other activities, such as child visits for which they are also accountable. So, family reunification rates may remain low. What is accountability and what is performance in the child welfare program?

As previously established, the role of Virginia child welfare services emphasizes their performance and accountability as very critical values that have received great attention from the State. VDSS illustrates *accountability* as maintaining "an organization and network that are both effective and good stewards of public funds and trust" and also *effectiveness* as striving to "maximize our resources and effectively meet the changing needs of our customers."[46] While both concepts are aimed at taking care of citizens, accountability and performance dynamics lead local caseworkers to confusion in their work practice; for example, a conflict between child safety and family reunification (see further discussions in section 4.2.2). Therefore, a question is raised: *how is accountability connected to performance?* In addition, local caseworkers should manage these conflicting accountability demands for better performance. Thus, the second question is necessary to be answered: *does accountability management matter for performance?*

3.1.3. Study Target (Population of Interest)

My target population is child welfare caseworkers (street-level bureaucrats). Yet, limiting the scope of my study, I focused on the child welfare caseworkers in the state of Virginia. Child welfare caseworkers fit Lipsky's (2010, p. 3) definition of street-level bureaucrats, which are "public service workers who interact directly with citizens in the course of their jobs, and who

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[46] http://vaperforms.virginia.gov/agencylevel/stratplan/spReport.cfm?AgencyCode=765 In this case, effectiveness used interchangeably with performance. Other values of VDSS agency include *integrity, innovation, excellent customer service*, and *diversity* besides the concept of accountability and performance.

have substantial discretion in the execution of their work . . . [as] public employees who grant access to government programs and provide services within them."

What exactly are my interview and survey subject pools? This study limits its investigation to a group of child welfare services in Virginia, which includes CPS, family preservation, foster care, and adoption. There are approximately 2,259 case-carrying child welfare workers in Virginia,[47] which I define as all professional child welfare workers on the payroll who carry cases and provide services directly to children and/or families (but excluding case supervisors). Specific study targets are discussed in the following sections. Below are the definitions for four specific types of case-carrying child welfare workers.

• Child protective service (CPS) workers—workers that provide child welfare first responder services to families in which a child has been reported as a victim of or at risk of abuse or neglect. The core CPS services are screening, safety assessment, investigation, risk assessment, family assessment, and referral for services.

• In-home protective service workers—workers that provide services to families in which a child has been identified as a victim of abuse or neglect and remains at home with their family or other caregivers, whether in the custody of the state or not. The core services include assessment, case planning, and implementation of services, which may either be intensive and time limited, or less intensive and longer term.

• Foster care and adoption workers—workers that provide on-going services to families in which a child has been identified as a victim of abuse or neglect, and is either living in foster care (e.g., relative/kinship, residential, or independent living) or has had the court approve a permanent out of home placement in which the termination of parental rights has been filed and

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[47] Refer back to Footnote 24 in Chapter 1.

adoption has been pursued. The core services include assessment, case planning, post-adoption support, and service delivery.

• Multiple child welfare program workers—workers that provide services for two or more of the above named child welfare programs (i.e., carry a mixed caseload).[48]

The empirical component of this study proceeded in the two stages based on a multi-method approach to collect data and test hypotheses. The interviews enabled me to dig deeper in order to probe key issues and uncover several examples of their accountability mechanisms and management behavior, whereas the survey allowed me to cast a wide net and explore population-wide perceptions on their work and strategies. Prior to these two stages, I had had informal conversations with a couple of child welfare supervisors and caseworkers for background information, which offered some valuable guidance and helped me to develop the data-collecting strategy.[49] These informal interactions validated my initial insights regarding the importance of accountability management in the child welfare front-line context.

Mixed method approaches to inquiry are increasingly used in the behavioral and social sciences as a tool to investigate a phenomenon in greater depth (Creswell, 2009). Mixed method scholars emphasize the use of multiple sources of data for verification purposes and to facilitate validation of findings. I chose an exploratory sequential strategy, in which qualitative exploration was used to identify variables and concepts which were in turn utilized to develop a survey instrument that was fielded to a larger sample (Creswell, 2009). In short, data of this study were produced via a two-stage process: 1) interviewing and 2) survey development and administration. I will explain in detail these two modes of research design in sections 3.2 and 3.3.

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[48] These definitions are excerpts from "2004 Survey of Child Welfare Workforce Issues" available at http://www.aphsa.org/Publications/Doc/Child%20Welfare%20Workforce%20Survey%20(6-1-04).doc.
[49] The informal conversation was held at the office during the fall of 2012.

3.2. Phase One: Interview Design

In this section, I will describe what my questionnaires were, how interviews were conducted, and how I analyzed the data.

3.2.1. Interview Procedures

The first empirical evidence comes primarily from web-based interviews with selected child welfare caseworkers in Virginia, which were conducted in March 2013. The interview questionnaire consists of seven questions, which include 'What does accountability mean to you?' 'How do you cope with any conflicts between accountability requirements?' and 'How do you define good work performance?' (see Appendix D for entire questionnaires). The interview protocols were developed through a review of the relevant literature in public administration, political science, and organizational theory as well as a consultation with child welfare workers.

The interviews were solicited via email messages that delivered an online interview link containing structured open-ended questions. There were no limitations on the length of the answers that respondents might choose to provide. Unlike face-to-face interviews, email interviews allow researchers to hold asynchronous conversations with participants and to generate reflective, descriptive data (James & Busher, 2006). Studies show that email interviews do not diminish advantage of older forms, but rather enrich the array of investigatory tools (Burns, 2010).

How many interviews are enough to produce informative data? There is no specific, set answer in the academic literature (Holstein & Gubrium, 2001). The progenitors of grounded theory methodology, Glaser and Strauss (1967), do not recommend a specific number of interviews or observations, but say that the researcher should continue until a state of theoretical

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saturation[50] is achieved. There is, however, no agreed method of establishing when data saturation has been reached (Francis et al., 2010; Guest, Bunce, & Johnson, 2006). My aim of conducting interviews is not to gather primary data but instead to get a sense of the informants' professional context and to use their understandings and language for the development of my survey questionnaire. Thus, I decided that approximately 30 cases (6 caseworkers from each five regions of Virginia; Central, Eastern, Northern, Piedmont, and Western) was enough for my interview targets.

A staff in VDSS Richmond helped me to distribute an interview link to one hundred child welfare caseworker using email, since I have no right to access the individual caseworker's contact information. I asked the staff to send an email as random as possible to approximately 20 caseworkers of each five service region. Despite this request, ensuring that each potential respondent had an equal chance of being selected to participate posed a challenge due to the uncertainty of the sampling frame and the limitation of not being able to control how staff randomly selected participants.

The access to the link was active for ten days. The text of the interview questionnaire's email solicitation included background information about the researchers, the purpose of the study, the schedule of the activated interview link, the study target population, and several additional notices. Their participation was completely voluntary and consent was implied by the return of their completed questionnaire. Participants had the choice to complete the interviews at locations convenient to them because the interviews were administered online. Sixty-eight caseworkers participated in the web interviews, counted for any "visits" by the *Qualtrics*

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[50] Data saturation means that "no new themes, findings, concepts or problems were evident in the data" (Francis et al., 2010, p. 1230).

software. Among these, 36 caseworkers answered most of the questions, which were used for the qualitative data analysis.

3.2.2. Qualitative Analysis Methods

Given that the nature of phase 1 of the study was exploratory, descriptive, and semantic, I used a content analysis[51] to analyze the child welfare caseworker interview data. Interview talk is, by nature, interpretation work concerning the topic in question. While there are multiple perspectives on the scope and methodology of content analysis, two prominent perspectives in general have been suggested: *interpretative approach* to content analysis (Berg, 2001) and *positivistic approach* to content analysis (Neuendorf, 2002).[52] The most significant difference between them is where the categories or codes come from. The interpretative approach has developed procedures of inductive category development whereas the positivistic approach has used a priori design which means codes and coding rules were made before the data were collected.

I chose to follow the former, which is essentially the 'grounded' (Glaser & Strauss, 1967) and 'naturalistic' (Lincoln & Guba, 1985) approach since my focus is on discovering underlying meanings of the words or the content (Babbie, 2013). In that sense, my approach is 'qualitative content analysis' (Graneheim & Lundman, 2004; Zhang & Wildemuth, 2009)—"a research method for the subjective interpretation of the content of text data through the systematic classification process of coding and identifying themes or patterns" (Hsieh & Shannon, 2005).

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[51] Holsti (1969) offers a broad definition of content analysis as "any technique for making inferences by objectively and systematically identifying specified characteristics of messages" (p.14). The core value of content analysis is to take meanings seriously.

[52] Krippendorff (2004) takes the complementary stance between the quantitative and qualitative approach to content analysis. For the relationship between quantitative content analysis and qualitative content analysis, refer to Kracauer (1952).

My aim for the content analysis of interview data is not to produce frequencies of words or phrases representing a magnitude of various concepts but instead to produce descriptions or themes[53] and categories[54] along with expressions from subjects reflecting how they view those concepts.

It should be noted, therefore, that the assessment was conducted in a relatively loose fashion; no formal and quantitative content-analytic coding scheme or calculus was used. I chose to code manually rather than by using electronic methods since the latter neglects the role of human interpretation and reflection (Kelle, 1995). A content analysis software NVivo (ver. 10)'s Word Frequency Query was employed only when I confirmed the magnitude and importance of key themes[55] and thereby categories. Instead, I tried to withdraw their narratives after I absorbed syntactical and semantic information embedded in the text (R. P. Weber, 1990) since the reality can be interpreted in various ways and the understanding is dependent on subjective interpretation (Graneheim & Lundman, 2004). Thus, I assigned a code to a text chunk of any size, as long as that chunk represented a single theme or issue of relevance to my research questions. The most important reason of this is that the analysis of terms such as accountability and performance is so nuanced and contextual such that the analytical tools hardly tract the linguistic sense (the problem of 'extrapolation'[56]). Hence my interpretation of these outcomes is somewhat heuristic rather than scientifically robust.

Nevertheless, I established reliable procedures and logic for qualitative content analysis referring to the literature to ensure scientific rigor (see Figure 3). The coding processes went through several stages. A word processing file (text) from the interview was created. All the

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[53] A theme is a simple sentence, a string of words with a subject (Berg, 2001)

[54] A category is "a group of words with similar meaning or connotations" (R. P. Weber, 1990, p. 37).

[55] In this dissertation, "key theme" means frequently occurring themes.

[56] "Extrapolations are inferences of unobserved instances in the intervals between or beyond the observations (data points)" (Krippendorff, 2004, p. 47).

accounts produced by the interviewees were taken into consideration and analyzed in order to identify patterns of consistency and variation in them. Analysis of the latent content revealed several broad themes and consistent patterns of concepts and behaviors reported by child welfare caseworkers. The process of coding allowed for the discovery of concepts that, when linked together, result in the core elements of accountability, performance, and accountability management. The unit of analysis of the content analysis is "parts of text that are abstracted and coded" (R. P. Weber, 1990), which refers to each "meaning unit" (a word or a sentence) in this study. The process of analysis involved a back and forth movement between the whole and parts of the text.

Figure 3: Qualitative Content Analysis Process

Condensation (Shortening the text)		Abstraction		
		Classification		
(A)	(B)	(C)	(D)	(E)
		Meaning Units	Key themes (Codes)	Category
Raw Data →	Condensed Text →	: / : / : / : →	: / : / : / : →	: / : / : / :
	Description		Interpretation	
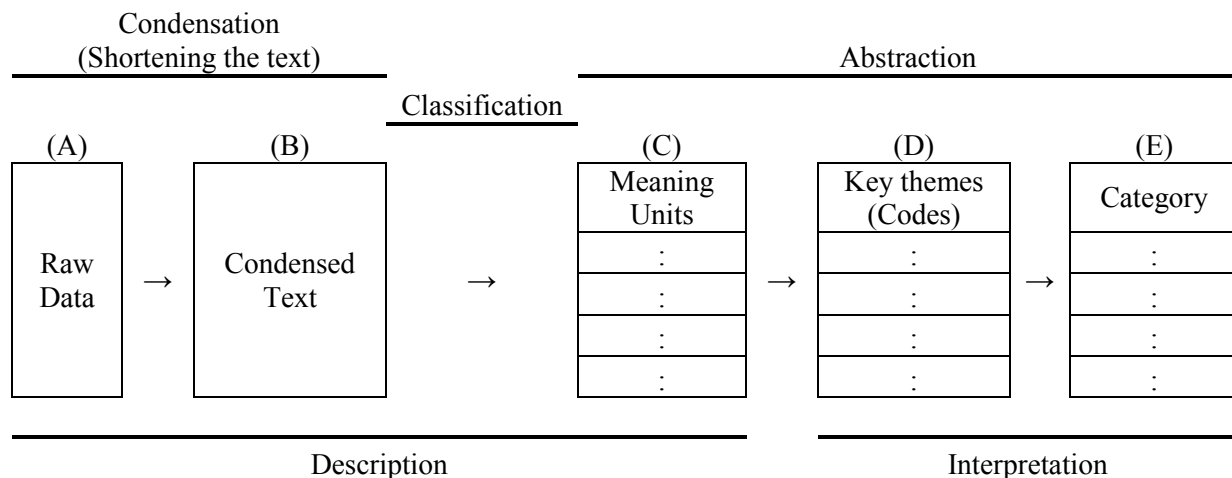
Note:
Condensation is a process of shortening while still preserving the core.
Abstraction is a process of creating of codes and categories.
A meaning unit is the constellation of words or statements that relate to the same central meaning. This also has been referred to as a keyword and phrase and a theme
(Source: Graneheim and Lundman (2004, pp. 106-107))

Although my approach to content analysis was an interpretative approach of inductive reasoning, when identifying themes that seem meaningful to the producers of each comment, I

used a combination of both inductive and deductive approaches. Through the inductive approach I intended to identify themes from the interview data, while the deductive approach helped sort the different meanings unto groups and to develop categories. The development of categories in this study was derived from inductive reference concerning patterns that emerged from the interview data (Berg, 2001). In addition, guidance was received from a criterion of definition (e.g., see Table 2) drawing on a theoretical background that helped to determine the different aspects of the textual material.[57] In short, when coding, I focused on the specification of the content characteristics and substantive meaning of the text (Kracauer, 1952) and put less emphasis on the application of explicit concept definitions for identifying and re-coding these characteristics.

Table 2: Operational Definition of Accountability (Reference for Selection)

Legal	Hierarchical	Political	Professional	Ethical
Tasks are carried out in accordance with laws and/or contractual obligations. Binding sanctions are available	Hierarchical relationships, close supervision Compliance with clearly stated directives	Demand for responsiveness and satisfaction of key stakeholders; clientele-centered management	Those with expertise exercise discretion Individual experts are answerable for their decisions and actions	Standards of good behavior arise from conscience, organizational norms and standards, and concern for the general welfare

Source: Dicke and Ott (2002, p. 467); adapted from Romzek and Dubnick (1987)

At the first stage, I spent a great deal of time familiarizing myself with the data ((A) in Figure 3). The coding process was an open coding process—reading carefully and minutely the

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[57] This approach can be called "directed content analysis" (Hsieh & Shannon, 2005), in which initial coding starts with a theory; then during data analysis, the researchers immerse themselves in the data and allow themes to emerge from the data. The extraction and development of categories for 'performance' and 'accountability management' was also guided by previous studies.

document line by line and word by word to determine the concepts and categories that fit the data (Strauss, 1987). I closely read and annotated each interview transcript and marked (by circling or highlighting) phrases or paragraphs of the text representing accountability, performance, and managing accountability. During this process, the texts were unitized and key words were highlighted and labeled. The key words that emerged in the course of this analysis reflect all relevant aspects of the messages and retain, as much as possible, the exact wording used in the statements, with only tentative modifications if any.

At the second stage, I made a list of *condensed text* (B) with verbatim comments (a chunk of words, sentences, or a short paragraph that I think represents one theme) from the content being analyzed. Based on the heuristics—separated meaning from the data—that I had at the first stage and on the theoretical definition of concepts, I classified *meaning units* (C) that well represent each concept from the verbatim condensed text (e.g., see Table 3). Having made a coding frame (i.e., meaning unit) as a list, I left a black line above and below each meaning unit and then printed out the units, cut up the printout into lots of small pieces of paper. At this stage, I rearranged the pieces on a table so that the most similar ones were grouped together. This coding process was iterative—repeatedly returned to and re-coded. Having sorted these classified meaning units thoroughly, I generated *key themes (codes)* (D). Codes are tags for allocating units of meaning to the descriptive or inferential information compiled during an analysis such that the codes are not only drawn from the interviewees' language (e.g., "Integrity" in Table 3) but also are created as a metaphor (e.g., "Responsibility" in Table 3).

I ended up crafting *categories* (E) from these grouped key themes (for the results of content analysis—representative, not full, lists are included in the meaning unit column—, see Appendix F, G, and H). For instance, "Proficiency" and "Timely" (first key themes in the upper

row in Table 3) helped to develop the "hierarchical accountability" category. The tentative categories were discussed and revised by two raters including my colleague and myself, which increases credibility of the findings (Graneheim and Lundman, 2004). A process of reflection and discussion resulted in agreement about how to sort the codes and categories. In addition, a review of literature related to the key themes provided phenomena that seemed to serve as relevant headings to unify the key themes into categories. Assigning a particular key theme to a single category was a difficult process; thereby, some units of themes or key themes were assigned to more than one category simultaneously (Tesch, 1990).

In order for sufficient consistency during the coding process (the issue of reliability), I put forth much effort. First, I repeatedly looked over each interview script, moving back and forth, in order to match the consistency of each caseworker's perceptions in detail. Second, when generating themes, key themes, and categories from the grouped lists during the second stage, another human coder[58] participated. After coding, we compared the coding themes and discussed what themes were agreed on and what should be added or deleted. This arguably increases trustworthiness of interpretations and makes the interpretations probable (Graneheim and Lundman, 2004). Inter-rater agreement such as Cohen's Kappa was not calculated since reporting it has little meaning for the present qualitative analysis.[59] Third, when devising categories inductively from raw data, I used the "constant comparative method" (Glaser & Strauss, 1967). The essence of the constant comparative method is (1) the systematic comparison of each text assigned to a category with each of those already belonging to that category, in order to fully understand the theoretical properties of the category; and (2) integrating categories and

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[58] He is a fellow doctoral student in the same program of the author.
[59] According to Cohen (1960), the categories should be independent, mutually exclusive, and exhaustive. However, the categories which are identified and studied as main concepts in this study are not mutually exclusive. For example, "guidance," included in "hierarchical accountability," could also be described as "legal accountability."

their properties through the development of interpretive memos. This way of process is helpful since the categories in the coding scheme are led to being defined in such a way that they are internally as homogeneous as possible and externally as heterogeneous as possible (Lincoln & Guba, 1985).

At the final stage of analysis, I carefully re-read the responses to the identical question asked in the course of each respondent's in-depth interview after the sorting was completed. As Berg (2001) advised, my analytical interpretations were also examined carefully by an independent reader[60] to ensure that my claims and assertions were not derived from a misreading of the data and that they have been documented adequately (*the issue of validity*). Despite the all efforts made, it is undeniable that the categories are 'rough' since they are dependent on subjective interpretations of the intertwined nature of human experiences (Graneheim and Lundman, 2004).

Table 3: Examples of Coding Process

Condensed Text (B)		Meaning Units (C)		Key theme (D)
"Accountability means to me work product that is completed proficient, with Integrity, and timely to persons who require a service (persons we service, the community, the judge, and others in the work force)."	→	(1) proficient and timely to persons who require a service (2) Integrity to persons who require a service	→	(1) Proficiency, Timely (2) Integrity
"In the child welfare system accountability means to me that some bureaucrat or some academic is going to expect you to do amazing things with a tiny amount or resources and then blame you and rake you over the coals when mistakes are made."	→	(1) do amazing things with a tiny amount or resources (2) blame you and rake you over the coals when mistakes are made	→	(1) Responsibility (2) Blame, Mistakes

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[60] I asked one of my program colleagues and one of the child welfare caseworkers for this review.

3.3. Phase Two: Survey Design

In this section, I will describe what my conceptual framework was, how I developed survey items and measured variables, how I collected data, and how I analyzed that data.

3.3.1. Analytical Framework

Chapter 2 suggested several hypotheses. This section provides an analytical framework for phase two of the study based upon my conceptual model (Figure 1) presented in Chapter 1. This dissertation's main analysis is a flow of perceived accountability expectations (A) → the importance of accountability management (M) → perceived work performance (P) ("AMP") (see Figure 4 below). This framework is an exact analytical diagram of the conceptual model, which, in part, refers to Yang's (2012, p. 271) illustrative accountability model.

First I examined the causal relationship between A and P to answer the question:*How does accountability affect performance?* While conflicting nature of general accountability may produce a negative effect, both formal and informal accountability mechanisms are very crucial in the context of child welfare system. As discussed in Chapter 2, however, informal accountability demands will constitute the majority of child welfare caseworkers' practice for performance compared to formal accountability with assuming that both formal and informal accountability will affect performance in a positive way (H1 and H2).

Then I tested the accountability management's (M) mediating effect in the relationship between A and P in order to answer my second research question: *Does managing accountability matter?* For example, I compared a model of A and P (direct effect) with a second model of A, M, and P (indirect effect). If the model of AMP is still significant and the A→P link has a decreased indirect effect, I interpret that M *plays a mediating role partially* between A and P. If

the model of AMP is still significant and the A→P link becomes non-significant, it is a *full mediation* (J. S. Kim, Kaye, & Wright, 2001). According to the accountability management perspective, which is based on the concept of managing expectations, purposive behavior, professionalization, and the theory of street-level bureaucracy, a worker's capacity to deal with the accountability demands is expected to contribute to the environment where accountability can lead to a performance improvement (H3).

Figure 4: The Analytical Framework
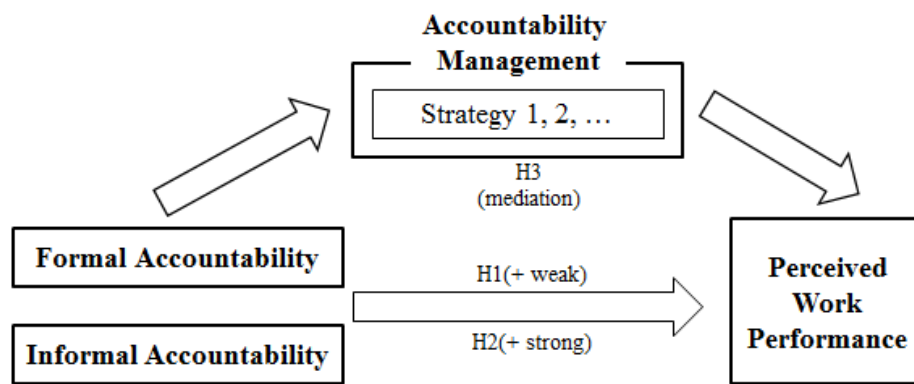
The hypotheses signal the main contribution of this dissertation, which is to provide nuance to our understanding of the relationship between accountability and performance. In particular, by examining of hypothesis 3, we can figure out more specifically *how* accountability management matters for performance. All hypotheses are summarized in Table 4.

Table 4: Hypotheses

H1	*Perceived formal accountability requirements weakly improve perceived work performance.*
H2	*Perceived informal accountability requirements strongly improve perceived work performance.*
H3	*Perceived accountability management mediates the relationship between accountability requirements and performance.*

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3.3.2. Instrument Development and Measurement

In order to further examine the framework, I used survey methodology. A survey is "a systematic method for gathering information from (a sample of) entities for the purposes of constructing quantitative descriptors of the attributes of the larger population of which the entities are members" (Groves et al., 2009, p. 2). This study used a Web-survey design.[61]

3.3.2.1. Construction Process

There was a multi-step process to survey development. The first draft of the survey instrument was developed based on the relevant literature in public management and organizational theory in the fall of 2012. Items were generated and modified within each of their dimensions based on the findings from the interview data in the spring of 2013. When writing items (Couper, Traugott, & Lamias, 2001), I followed Hinkin's (1998) guidelines:

1) Statements should be simple and as short as possible.
2) The language used should be familiar to target respondents.
3) All items should be kept consistent in terms of perspective.
4) Items should address only a single issue, avoiding double-barreled items.
5) Leading questions that suggest a particular answer should be avoided.
6) Items that all respondents would answer similarly should not be used.

This dissertation attempted to design questions that were clear, simple, and easy for respondents to comprehend and answer adequately, by following Hinkin's suggestions. Also, they were designed in a way that would minimize error. Survey error should be minimal because it diminishes the accuracy of inferences derived from that survey data. Groves et al. (2009) suggest two central points when considering error: (1) respondents' answers must describe certain

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[61] For the latest and rich discussions on the Web surveys, please see a special issue on 'Web Survey Methods' in 2008 in *Public Opinion Quarterly* and visit www.websm.org for a detailed bibliography.

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www.manaraa.com

characteristics of the respondent, and (2) the subset of persons participating in the survey must have characteristics similar to those of a larger population (p.40).

The total survey error (TSE)[62] framework (Groves, 1989) was considered throughout the survey designing process in order to increase survey quality (Biemer, 2010). While sampling error[63] is of little concern in my study since my scope of this survey is purposefully limited to the Commonwealth of Virginia and the survey targets all caseworkers in Virginia, my concern lies primarily on coverage, non-response, and measurement errors.

One of big challenges of my study is a coverage error. Although all child welfare caseworkers could access the internet through which my survey URL link was reached, I have no idea whether all caseworkers received the email solicitation or not. Additional discussions are followed in sections 3.3.4 and 3.4.

Ambiguous questions, confusing instructions, and easily misunderstood terms were avoided so that respondents would be more likely to participate in the survey. To avoid lengthy measures which could result in a survey that would be cumbersome for respondents and would jeopardize the validity of the results, well-validated and essential items were included. I used a systematic priori process for reducing the number of items used to assess the constructs in a given study (Maloney, Grawitch, & Barber, 2011). Also, two reminders were sent out via e-mail during the survey period to encourage as much participation as possible.

To deal with measurement error including social desirability issues—"the tendency to present oneself in a favorable light" (Groves et al. 2009, 168)—several measures were taken. First of all, survey measures were guided, whenever possible, by previously validated measures.

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[62] For the lengthy discussion of the TSE in terms of its definition, development, and strength, see Groves and Lyberg (2010).
[63] It is true that there still remained a certain level of representation issue because a Web survey is based on self-recruitment, and it does not yield an exact representative sample. However, this issue also jeopardizes the traditional survey mode.

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In other words, to ground my work in the empirical literature, my survey adopted questions from several previously developed survey instruments used in prominent research on public management and organizational behavior. I put much effort into exploring whether adopting these questions would be accurately representing what I intended to ask in the child welfare context, in order to form an adequate dataset. Also, when developing the items based on the interview data, I paid careful attention on the phrasing of neutral questionnaires since items may cue subjects as to the expectations of the researcher, creating a demand effect (Nederhof, 1985). The wrong parameter can be estimated by the survey, which could lead to invalid inferences, when the concept implied by the survey question differs from the concept that should have been measured in the survey (A specification error).

Basically, the measurement in this dissertation is based on 'summated scales,' for which several variables—that is, each survey questionnaire—are joined in a composite measure to represent a concept. This does not place total reliance on a single response, but instead on the average or typical response to a set of related responses. This multiple measurement will be likely to reflect the "true" response more accurately, thereby reducing measurement error[64] (Hair et al., 2010, p. 8). Harvey et al. (1985, in Hinkin (1998)) recommends a minimum of four items per scale for testing the homogeneity of items within a latent construct. By selecting multiple items (more than four), I retained the possibility of deleting items in later stages of the scale development process (DeVellis, 2011). Furthermore, conducting factor analysis may ensure that content measures are not confounded with a principal component representing social desirability bias (Paulhus, 1991).

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[64] The measurement error refers to "the degree to which the variable is an accurate and consistent measure of the concept being studies" (Hair et al., 2010, p. 172).

While social desirability issues are prevalent, numerous methodological studies have established that self-administration like web surveys lessens social desirability effects (Kreuter, Presser, & Tourangeau, 2008). The design of the self-administered surveys is important in obtaining unbiased answers from respondents since they seek motivation or guidance from the instrument itself in the absence of an interviewer (Ware, 2012). I included visual elements and color in the Web, which can be helpful for gaining data quality (Couper et al., 2001).

To further increase content validity, several experts examined the initial pool of items. They included my dissertation committee members who specialize in public administration and research methodology and one specialist in electronic surveys from the Survey Research Center at Virginia Tech. Further, three child welfare service specialists also assessed the items to determine appropriate terms for the child welfare service case study. After each review, I could potentially add or discard items based on the expert's comments.

3.3.2.2. Measurement

I explained my various considerations when designing a survey in the former section. In this section, I list what I measured for the concepts that I am studying. A full list of survey questions and coding scales are provided in Appendix E. As I illustrated, the basis for constructing the survey questionnaires was the literature; yet since the standardized questions may not be well suitable to new context, I developed my own survey questionnaires based on the interview data as well as child welfare documents. The key concepts that I measured are performance, accountability, and accountability management.

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Perceived Work Performance

There has been continuous criticism in the child welfare literature as to whether the outcome measures required by the federal government are accurate indications of overall child welfare system performance (Courtney et al., 2004). Therefore, I measured child welfare work performance by *perceived* rather than absolute measures. There are several specific reasons that I conducted a perceptual measure of performance. First, the objective measure or output is a function of resources and constraints within organizations. In particular, that is the case in the agencies providing social services. As I found from the VDSS documentation and informal conversations with child welfare workers, they always operate under a lack of resources. Moreover, the literature points out the problem of number-driven performance measurement results at the street-level.[65] Caseworkers tend to be in constant contact with the child-client and family, as well as other policy providers. Accordingly, measures of performance such as the child abuse and neglect rates might not cover all aspects of performance, including caseworkers' interaction with the clients.

Second, one single objective performance datum well-representing workers' overall performance cannot be established in the child welfare context due to conflicting measures. For example, the principles of avoiding placement and effecting reunification as quickly as possible conflict with the measures of placement stability. That is, a state that prevents placement whenever possible for early reunifications will be left with a placement population that is more difficult, with greater problems, and therefore more likely to encounter multiple placements.

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[65] The problem is that performance measures may give the appearance of accountability, but actually obscure a full picture of how agencies work and how caseworkers are producing the real content (Brodkin, 2008, p. 332).

Furthermore, a state adhering to the principle of "least-restrictive alternative" will tend to place children in "lower-level" placement situations whenever possible.[66] [67]

Third, while objective data have been preferred for evaluating performance (Meier & O'Toole Jr., 2013), perceptual performance measures (e.g., Ritz, 2009) may be a reasonable alternative (Dess & Robinson Jr, 1984; Schmid, 2002) and a widely used measure of productivity (Campbell & Pritchard, 1976; Patchen, Pelz, & Allen, 1965), since there is evidence of a high correlation between perceptual and objective measures at the organizational level (S. M. Kim, 2005).[68] Also, managerial perceptions provide some evidence of organizational realities (Stazyk & Goerdel, 2011). In fact, the Virginia State annually assesses social public workers at the individual and program level. The individual performance results, however, can be accessed only by internal staffs, restricted to others (refer to Footnote 66).

The issue of "common source bias," which is a type of measurement error, occurs "when some of the common variation between two concepts is a function of the common measurement and/or source used to gather the data" (Meier & O'Toole Jr., 2013). For example, respondents may overestimate the level of performance, reflecting favorably on themselves. In order to

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[66] The performance evaluation becomes part of the employee's *personnel file* after the performance evaluation meeting has been conducted. The information in the performance evaluation should not be disclosed or available to anyone other than those authorized to access the employee's personnel file without the employee's written consent.
[67] In an informal conversation, one child welfare worker stated that "Our work is evaluated by numerous factors. A lot of the performance is based on things such as response time or timely closing of cases. While these are important to the state, in this line of work, many of the things that constitute "good work" are not as easily identified. Our primary objective is child safety. One could have good performance on paper but children could still be in danger. It is more difficult to define good work when it comes to how cases are handled in the field. A lot of this is based on experience and judgment in recognizing safety concerns that put kids at risk how to reduce these. At evaluation time, our performance is based on how well cases are documented as well as the other items (response time, etc.)."
[68] Such perceptual measures of effectiveness have been reasonably connected to objective measures because an employee-defined effectiveness measure providing a broader assessment of effectiveness is perhaps more valuable than programmatic performance measures (Pandey, Coursey, & Moynihan, 2007), and assessments are based on the knowledge of employees who know the organization the best (Brewer, 2006; Isett, Morrissey, & Topping, 2006). A recent meta-analysis of existing studies with both administrative and survey measures found that the type of performance measure made little difference to the statistical results (Andrews, Boyne, & Walker, 2011, p. 241). At the assessment of citizens surveys versus objective measures of performance, Schachter (2010) contends that the objective-subjective debate is a matter of "words" rather than substantive impact.

address this bias, I put much weight on survey design, such as precise and concise questionnaires as I explained in the former section (section 3.3.2.1). The process of survey instrument development underwent several meetings with committee members as well as survey experts who were available on campus. In addition, I asked the staffs to distribute the survey evenly and randomly across Virginia. Due to the qualitative aspect of the child welfare work, the perceived work performance measurement in this study will yield a reasonable and meaningful dataset for understanding the accountability-performance link.

The measurement of the individual's conception of work performance is developed in terms of efficiency, effectiveness, and fairness (Brewer & Selden, 2000). The reason for assessing an individual's conception is that the performance of child welfare agencies are driven by the work of caseworkers (Casey Family Programs, 2011), and these dimensions are expected to represent their performance well. The reason for assessing "work performance" rather than "individual performance" is that caseworkers in child welfare usually work together when they make a decision on the child's safety so that their individual performance ties well with their work unit performance (American Humane Association, 2011). Also, given the nature of the questions that were asked in the survey, there is a strong likelihood that many of the respondents hardly responded about their individual performance with a neutral position under anonymity.

In addition to the literature, child welfare outcomes are considered, but not adopted, directly (Ryan, Garnier, Zyphur, & Zhai, 2006). Three highest priority outcomes in the child welfare services are *safety, permanency, and well-being* (Testa & Poertner, 2010).[69] Child safety is perhaps the most important and highest priority outcome of all child welfare-related activities. An outcome of safety refers to the ability of the system to remove the child from harm or a risk

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[69] This paragraph relies heavily upon Testa & Poertner (2010).

of harm and maintain the child in an environment that continues to avoid harm or a risk of harm. Typically safety has been operationally measured with regard to reports of abuse/neglect to child protection agencies subsequent to involvement in the child welfare system. Permanency is a reference to the mandate of the child welfare system to provide the child with a living environment that is not only safe but stable and is without the interference of an outside authority (i.e., the child welfare system). Permanency has been often operationalized in terms of duration or time—the time between when the child is taken into the custody of the child welfare system and when he or she is relinquished from that system, be it by adoption, guardianship, emancipation, attainment of majority, or return to his or her natural parents. Permanency has also been measured in terms of placement stability—the number of substitute care placements a child experiences within a given period of state custody. Well-being as an outcome is a recognition of the possible negative emotional and behavioral effects, along with others, that abuse and neglect can have on a child, as well as a recognition that a child's experience within the child welfare system should not further contribute to negative personal consequences and can or should have an ameliorative, corrective, or compensatory effect. The term well-being encompasses a variety of outcomes and has been variably assessed in terms of mental and emotional health, physical health, and educational/occupational attainment (Testa & Poertner, 2010).

As we will see in Chapter 4, the analysis of interview data presented several dimensions of performance: effectiveness, efficiency, professionalism, and fairness. Combining these with the literature and the objective outcome measures of child welfare with the gathered interview data, eight questions were finally developed to measure the dependent variable, *perceived work performance*. I measured the level of their agreement with the following:

- *My work unit has kept children safe.*

- *My work unit has promoted positive change in families.*
- *My work unit has met state mandates for job performance.*
- *My work unit has responded in a timely manner to allegations of abuse.*
- *My work unit has brought in police support for joint investigation when appropriate.*
- *My work unit has tried to work with families as soon as possible.*
- *My work unit has not hesitated to bring matters to court if court action is needed.*
- *My work unit has provided suitable placements for children, such as in foster care, when necessary.*

Meier and O'Toole Jr. (2013) advise that the performance question should focus tightly on a "specific indicator" of performance, which is "precise," when a researcher decides to use perceptions of performance. Brewer and Selden's (2000) efficiency, effectiveness, and fairness components as well as the objective outcome measures are embedded in the devised questionnaires. The seven Likert scale response sets (1 = Very strongly disagree; 7 = Very strongly agree) are used.

Accountability Requirements

I reflected most frequently on Romzek and Dubnick (1987) typology when devising the accountability questions. From the interviews, I identified multiple accountability demands in the child welfare context. Considering the legal, professional, political, hierarchical, and ethical accountability in terms of the literature, and the real challenges of child welfare accountability requirements, I generated seventeen questions to assess *formal and informal accountability pressures.*

- *Uphold federal regulations*
- *Uphold state policy*
- *Follow court decisions*
- *Fulfill documentation requirements*
- *Respond to the community*

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- *Serve children*
- *Serve families*
- *Explain your actions to supervisors*
- *Take responsibility for mistakes you made*
- *Improve the quality of child welfare services*
- *Follow the direction of my supervisors*
- *Learn your role as a caseworker*
- *Cooperate with co-workers*
- *Increase professional capacity for child welfare service provision*
- *Maintain ethical standards*
- *Maintain social values*
- *Do the right thing at all times*

Caseworkers were asked to answer the question, 'Thinking about the past two years, please indicate the amount of pressure you have felt to do each of the following,' within the scale between 1 (Very little) and 7 (Very much).

Accountability Management

While I discussed the definition of accountability management and strategy in Chapter 2, I clarify further "managing expectations" and "strategy."[70] Accountability management is basically an act of *managing accountability expectations*. Accountability management by individual caseworkers (individual management) involves identifying, defining, and managing diverse expectations placed upon organizations by internal and external stakeholders. The theory of street-level bureaucracy, which pays attention to caseworkers' discretion and managerial actions, supports notion that caseworkers manage accountability demands in their daily practice for better performance. Thus, accountability management is expected to play a 'mediating' role between A and P (see section 3.1.2 above for additional explanation).

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[70] These two concepts as well as 'accountability management' are used interchangeably in my dissertation.

I understand accountability management as a set of strategies. I define *strategy* in accountability management as the proper use of discretion and efforts for management of their accountability environment in search of the most advantageous path to their performance and public goals. A couple of strategies may emerge from the use of their judgment, the structure of their jobs, their supervisors, or their internal agency directives. For example, caseworkers work closely with families, conducting regular visits with intact families and with children in foster care and facilitating visitation between family members when children are placed outside the home. Caseworkers meet with children and families to monitor children's safety and well-being; assess the ongoing service needs of children, families and foster parents; engage biological and foster parents in developing case plans; assess permanency options for the child; monitor family progress toward established goals; and ensure that children and parents are receiving necessary services (Casey Family Programs, 2011). At each stage of the intervention, caseworkers, with the support of their supervisors, determine the type of support that children and their families need to ensure that the children are safe, are in or moving toward permanent homes, and have stable living arrangements that promote their well-being (National Conference of State Legislatures, 2006). During these roles, individual caseworkers might have developed their own strategies.

The literature (Kearns, 1996) is a good starting point to create the items and measure accountability management. However, the possibility of new strategies to be emerged from the child welfare practices was open. As a result, new strategies are identified from the interviews: discretionary, compliance, communication, and information strategy. Among three major variables in this study, the concept of accountability management was most novel and variable. Eight items to measure accountability management strategies were formulated. The question is on the level of importance of each strategy: 'When you face conflicts between the items that

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were evaluated in Question 2 [accountability pressures], please indicate how important each of the following is' (1= Not at all important, 7= Extremely important).

- *Using my professional judgment*
- *Pursuing the best interest of the child*
- *Following state child welfare policy*
- *Following my agency's guidelines*
- *Consulting with my supervisor, regional consultant, or co-workers*
- *Communicating with official institutions such as the court or legislature*
- *Learning from decision making tools such as Structured Decision-Making*
- *Getting information from others outside of my work place*

Control Variables

Characteristics of the survey respondents may influence work performance. I included job title and category, length of service, size of organization, service region, educational background, gender, and age. The use of control variables is for ruling out alternative explanations; that is, addressing issues of internal validity (Becker, 2005), thereby reducing the possibility of spurious statistical influence.

In sum, the survey consisted of four sets of rating scales plus several background questions: perceived work performance, formal and informal accountabilities, accountability management, and demographic items. The unit of analysis is an individual level. For each question, caseworkers were presented with a seven-point Likert-type scale with responses. The higher the value, the greater the degree the respondents agreed with.

3.3.3. Sample

The target population for the survey was child welfare caseworkers in Virginia and my sample is all caseworkers. According to the VDSS report (see Footnote 24 in Chapter 1), there are approximately 2,259 child welfare caseworkers on the VDSS payroll. I have a number of rationales for why I targeted all child welfare caseworkers in Virginia for this survey administration. First, the number of caseworkers in Virginia is relatively a small population to study. Second, this approach reduced the possibility of sampling errors. Third, and most importantly, Web survey response rates are typically lower than those of traditional methods such as mail surveys (Manfreda et al., 2008) while survey non-response rates in general appear to be rising (De Leeuw & De Heer, 2002). Hence, this is a strategic choice in order to overcome the above challenge and to get valuable and rich data.

Sample size is important in that it impacts the ability of the respondents to represent the population and it also affects statistical power (Hair et al., 2010). I refer to two scholarly suggestions to estimate the "completed" survey sample (Dillman et al., 2009) that I must get back for a sufficient statistical analysis: Yamane's (1967) formula for calculating sample size in general and Hair et al.'s (2010) suggestion for sample size of structural equation modeling (SEM).[71]

First, in order to determine sample size, *precision level* and *confidence level* should be considered. The level of precision, sometimes called *the margin of error* or *sampling error*, "is the range in which the true value of the population is estimated to be" while the confidence level means that "when a population is repeatedly sampled, the average value of the attribute obtained by those samples is equal to the true population value" (Israel, 2009). For instance, a confidence

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[71] SEM is a useful method since the SEM analysis controls measurement errors associated with the latent constructs, thereby increasing the reliability of the parameter estimates, and it can simultaneously test all of the relationships specified in the model. More details are described later in section 3.3.5.

level of 95% means that 95 out of 100 times samples would have the true population value within the range of precision, for example 3%, 5%, or 10%, and 5% would be unrepresentative samples. Higher confidence and precision levels require larger sample sizes. Also, *the degree of variability*, which refers to the distribution of attributes in the population, is one of criteria that usually will need to be specified to determine the appropriate sample size (Israel, 2009). In social science research, it is best to use the conservative figure of 50%-50% of variability (P =.5) when variability is too difficult to estimate. Among formulas for calculating a sample, Yamane (1967, p. 886) provides a simplified formula to calculate sample sizes. A 95% confidence level and 50% of variability (P =.5) are assumed for the Equation.

$$n = N / 1 + N (e)^2$$

where n is the sample size, N is the population size,[72] and e is the level of precision. N is 2,259 and I expect that the margin of error (the level of precision) might be between 5% and 10%. For the purpose of convenient calculation, I supposed 7.5% for the precision level. Accordingly, I formulated this Equation:

$$n = 2{,}259 / [\ 1 + 2{,}259\ (0.075)^2\ ] = 164.89$$

The *completed* sample size n amounts to 165 according to Yamane's (1967) formula. Thus, a completed sample size of around 165 cases is needed to be sure that the estimate of interest will be within *a 95% confidence level* and *a 7.5% precision level*.

Second, Hair et al. (2010, p. 644) offer a minimum sample size for SEM. For example, a minimum sample size of 150 is recommended for the models with seven constructs or less,

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[72] It should be acknowledged that the target population (N) originally refers to all child welfare caseworkers in the US. However, I limited my scope to Virginia and I survey *total population* in Virginia. Therefore, strictly speaking, "n" means "completed sample responses" and "N" indicates "total sample frame in Virginia" to whom my survey is distributed when I calculate the sample size.

modest communalities (.50),[73] and no under-identified constructs. A minimum sample size of 300 is needed for the models with seven or fewer constructs, lower communalities (below .45), and/or multiple under-identified (fewer than three) constructs. I may build around seven to nine constructs and expect modest communalities. Some constructs may be under-identified. Hence, my sample size can lie between 150 and 300. The literature also advises that a sample size of 150 observations should be sufficient to obtain an accurate solution in exploratory factor analysis (EFA) as long as item inter-correlations are reasonably strong (Guadagnoli & Velicer, 1988). For confirmatory factor analysis (CFA), a minimum sample size of 200 has been recommended (Hoelter, 1983). When it comes to the sample size for SEM, Loehlin (2004) recommends at least 100 cases, preferably 200.

All things considered, with these two scholarly suggestions—Yamane's (1967) formula and suggestion for sample size of SEM (Hair et al., 2010) with the literature—a sample size of approximately 150 to 200 cases (respondents) is recommended *to be completed* (Dillman et al., 2009) for sufficient power and adequate calibration.

3.3.4. Survey Data Collection

A large-*N* empirical study through a survey of Virginia caseworkers' perceptions is critical in this study. The result can provide us with implications of the accountability–performance link within the street-level bureaucracy. The limit of scope to Virginia is purposive in order to avoid the institutional and statutory differences that occur across states in the US context.

Prior to a survey distribution, I edited terms used in my survey measurements based on caseworkers' and experts' recommendations in order to ensure that respondents understand and

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[73] Communality(ies), which is a statistical term, represent "the average amount of variation among the measured/indicator variables explained by the measurement model" (Hair et al., 2010, p. 643).

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answer the queries. Also, I had the questions reviewed unofficially by Virginia Tech's Center for Survey Research and other experienced researchers in order to correct some minor problems to help with the flow of the survey and eliminate double barrel questions.[74] Finally, a trial run of the entire survey was administered to three selected caseworkers in order to determine the clarity of the survey design. I instructed pre-test takers to take notes on questions that they did not understand or any wording that was unclear. Results from this pretest suggested the need for final modification of the questions and of the survey forms, ultimately yielding much neater and more comprehensible questions, which would aid the respondents in answering the questions more accurately (Fowler, 2009).

Electronic surveys offer a number of advantages such as cost-effectiveness and user responsiveness over postal surveys (Enticott, 2003). Survey takers would have enough time when they are available, thereby allowing a better environment for them to answer the questions with the best of their ability. Informants were assured of the confidentiality of their responses.[75] The introductory message within the survey included the following statement: "This survey is for academic purposes only, and it is completely confidential. Participating/completing the survey is voluntary."

Since the researcher was barred by VDSS policy from contacting potential research participants directly, an e-mail containing my solicitation of participants and the survey URL link was distributed by a CPS policy specialist who works in the VDSS Headquarters. This staff member was instructed to disseminate the survey to all child welfare caseworkers (2,259

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[74] The order of survey questions was not randomized since my survey design was not complex enough to consider the order effect—the questionnaire topics consisted of three (accountability, performance, and accountability management).

[75] Identifiers were dropped automatically from the dataset when the *Qualtrics* software collected the data. Once the survey period (approximately two weeks) ended, I could only access the collected data in the *Qualtrics* program site with a password, which means the data will be maintained confidentially.

caseworkers) in Virginia. In addition, I obtained the e-mail list of all of the directors of the Virginia child welfare program, which is publicly accessible from the Virginia League of Social Services Executives (VLSSE) website, and sent e-mail messages asking them to introduce my survey to the caseworkers.

The URL link was open for two weeks in May 2013. Two follow-up reminders containing the survey link were sent one week after the survey launch and three days before closing the survey, again by the VDSS staff member, in an effort to receive more valuable responses from caseworkers and also to increase the response rate. Further reminders might be construed as pressure to participate. As a result, I obtained one hundred fifty five (N=155) completed responses. Assuming that the survey was sent to 2,259 caseworkers, the response rate was 6.86 per cent. This response rate, however, may be of little predictive value (over- or under-estimated), because the actual number of caseworkers who received the email invitation containing a survey link from the staff in Headquarters or directors cannot be known (coverage error).

The low rate of responses might be a concern in terms of its representativeness of the population.[76] Unfortunately, there were no available data on the dimensions (i.e., agency type, job, education, sex et al.) on child welfare workers as a whole that could be used as a comparison with the participants of the study. Because of this response bias as well as the coverage error, the self-reported survey probably contains a certain amount of noise, which is one of significant limitations of this study.

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[76] As I illustrated in Footnote 63, a certain level of representation issues always remain in a Web survey (even in the traditional survey mode), since it is based on self-recruitment when caseworkers are invited to participate voluntarily (Manfreda et al., 2008).

3.3.5. Quantitative Analysis Methods

Once the data were obtained, I examined missing data, outliers, and the assumptions underlying multivariate techniques such as normality, linearity, and homoscedasticity (Tabachnick & Fidell, 2007). I examined the data thoroughly to check for missing values and they were replaced by mean values in the dataset for the model estimation.[77] In order to proceed in the analysis of a causal relationship, the data were tested with *normality, homoscedasticity and linearity,* (Hair et al., 2010) using the SPSS (Statistical Product and Service Solutions) 16.0 program. If the data satisfy these conditions, I run exploratory factor analysis (EFA) in order to reduce data and build constructs (i.e., latent variables) using the SPSS. A principal axis factoring was run on the survey responses to ensure the unidimensionality of the survey questions.

Using a two-step approach, measurement properties of the model were assessed prior to estimating the structural relationships between latent variables (Anderson & Gerbing, 1988). Based on the extraction of EFA, I conducted confirmatory factor analysis (CFA) to assess the factor structures of the latent variables (to check *construct and discriminant validity*). After completing the above prerequisite analysis, structural equation modeling (SEM) using the Amos (Analysis of Moment Structures) 16.0 software[78] was employed to examine the AMP model with the large-*N* data. In the structural model, the A → P link was examined. Besides the causal relationship of accountability and performance, I assessed the mediating effect[79] of M—the

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[77] I replaced missing values with mean values since there were few missing data thereby having a less 'inflation' issue. The effects of inserting mean values upon my results are negligible since the portion of missing value was below 1 % of each item (Table 16 in Chapter 5). When the missing values are significant in a big sample, however, listwise deletion is recommended (Hair et al., 2010).

[78] AMOS is relatively a recent package that, because of its user-friendly graphical interface, has become popular as an easier way of specifying structural models.

[79] In contrast to mediating effect, moderating effect analyze how a focal independent variable and a factor that specifies the appropriate conditions for its operation interact toward dependent variable (Baron & Kenny, 1986). While moderator research typically has an interest in the predictor variables per se, mediator-oriented research is more interested in the mechanism. For more details on the moderating and mediating effects, see J. S. Kim et al. (2001).

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proper intermediate mechanism of accountability management through which accountability affects performance (Baron & Kenny, 1986).

SEM is beneficial for my study since it examines more than two causal relationships in the model simultaneously, which can be modified through a process of respecification (Hair et al., 2010). This study attempts to confirm the conceptually hypothesized relationships between A, M, and P. Furthermore, it uses latent variables that are based on observable variables, so it reveals stronger relationships. My survey instrument was built with multiple-items to measure each concept. The SEM analysis controls measurement errors associated with the latent constructs, thereby increasing the reliability of the parameter estimates. Lastly, it shows total effects as well as indirect effects from the model. Both effects help us understand the relationship clearly that I proposed (Ullman, 2006).

There are challenges and limitations when using SEM as well. The biggest limitation is sample size. It needs to be large to get stable estimates of the covariances or correlations. My data barely satisfied minimum of the recommended sample size. Also, the researcher must pay attention to the likelihood of excluding critical items through the modification process, although this is prevented by developing a strong survey instrument. The application of SEM to my study may not be the best choice since the concepts of accountability and performance are blurry in practice, and SEM is usually applied to measure theoretically strongly developed concepts (Ullman, 2006). In addition, the analytical procedure involved in SEM is more complex than that in a multiple regression model. For example, construct and validity test as well as model fit should be examined (Loehlin, 2004). SEM also has a limitation of applicability. For instance, SEM is not suitable for examining non-recursive relationships since it helps to examine cause-and-effect type relationships (Hair et al., 2010). This study examines the A → P link and a

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mediating effect of M. Despite the challenges of using SEM, I argue that the advantages of employing SEM in this study (e.g., examining multi-relationships simultaneously and controlling measurement errors) will outweigh the limitations.

3.4. Limitations and Summary of Methodology

As with any research project, there are several limitations associated with the research design of this dissertation. First, the measures of all variables are dependent primarily on the respondents' perceptions. While self-reported measures may create some issues with content validity as to whether the survey responses are a reflection of caseworkers, which means that there may be a lack of scientific rigor, perceptual measures are as solid as objective measures (Chun & Rainey, 2005). Also, it is arguably true that perceptions drive psychological and behavioral responses. The limitation of measuring accountability is well discussed in the literature (Bovens, 2007; Brandsma & Schillemans, 2013). Common-source bias is a problem in the data because most of the variables come from a survey. Although common-source bias exist, however, its effect is not strong enough to invalidate relationships but could "marginally attenuate the strength of the findings" (Moynihan & Pandey, 2005, p. 428).

Second, the measures and indicators can create some problems with the validity of my findings. Several efforts have been made. I used multiple items as measures of the same indicator. Also, I developed survey questions drawing on a careful review of the existing literature to ensure that I considered all relevant dimensions of the topic. Moreover, I took several steps to address it through, for instance, a pre-test and careful explanation of the purpose of the survey when administering.

Third, there exists a challenge on the representativeness, whether participants' responses represent Virginia child welfare workers' perceptions. In particular, the low response rate in the survey may yield a significant nonresponse bias. While I put a lot of efforts to elicit as many responses as possible, this is unavoidable due to the limit of access to the informants and thereby indirect Web survey solicitation. Despite the limitation, the characteristics of interview and survey data fairly showed that caseworkers who participated in this study had diverse backgrounds from all five regions in Virginia (see Tables 13 and 14 in section 5.1 below).

Finally, this dissertation aimed to build the AMP model, so it did not include other prominent explanatory variables such as trust and organizational culture. As such, explanatory power (R^2) was low in the final AMP model but this was not unexpected according to the theory. Government program performance is affected by institutional, organizational, and technical factors (Lynn et al., 2001), and each factor has multiple dimensions in it, which implies that my focus on the relationship between accountability and performance is only a part of the patchwork. This arguably raises concerns about the specification error. While we acknowledge that the relevance of extra-organizational influences are discounted by training and work socialization of social workers (Lipsky, 1980, p.141), organizational arrangements and programmatic culture may affect perceptions of sources of accountability and available strategies of accountability management. Not including an important variable (leaving it uncontrolled) can mess up my results. Having considered the limitations of excluding possible influences, I put a lot of effort into accurate measurement (see section 3.3.2.1 above).

This chapter has described my research strategy, design, and methods for producing and analyzing the study's data. This dissertation offers a cross-sectional analysis of the accountability and performance link and the accountability management of caseworkers. I chose two main

methods to explore this relationship: interviews and a survey. Though the dissertation has some limitations, as outlined above, it offers the framework needed to explore and theorize about the impact of formal and informal accountability on performance.

The next two chapters present the main findings from the interview and survey data. I will discuss the meaning and importance of the findings and state the relevance of the findings based on the literature.

CHAPTER 4. MAKING SENSE OF ACCOUNTABILITY AND PERFORMANCE

Prior to analyzing the main theme of A → P (Phase 2 of the study), this chapter explores what comprises accountability and performance in the child welfare service context, as this dissertation distinguishes accountability and performance as different dimensions of public management. Also, preliminary accountability management strategies are identified.

An intellectual awakening in public management has developed: Why is there still a lack of meaningful improvement in organizational performance while witnessing an expansion of regulations or reforms to ensure accountability? One of the reasons might be a narrow focus on performance measurement and, accordingly, a lack of organizational learning (Ebrahim, 2005; Greiling & Halachmi, 2013). Today's literature on accountability and performance is vast and diverse. However, there is a lack of clear understanding of what accountability or performance means in practice. In his review on the accountability research, Yang (2012) argues that we need more actionable knowledge.

This chapter provides an exploratory analysis of administrators' understanding of accountability requirements, their alignment with performance measurement, and their accountability management strategies based upon the data collected from interviews. How do child welfare caseworkers define accountability and performance? How are accountability and performance similar or different each other? How are public workers held accountable to their managers and others? What is the importance of accountability? What happens when there is a complaint or a dispute? How do public workers deal with conflicting accountability requirements? This qualitative study attempts to answer these questions and is a basis for the quantitative study in Chapter 5.

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4.1. Introduction of Interview Data

Data collected from interviews with 36 child welfare caseworkers were analyzed using qualitative content analysis. The respondents represent a diverse mix of child welfare services, some of which include CPS, foster care, and mixed services. As presented in Table 5, the respondents are also diverse in terms of their service regions and child welfare work experience.

Table 5: Characteristics of Interviewees

Job Characteristics	CPS worker: 15 Foster care and adoption worker: 8 Multiple child welfare program worker: 6 Others (foster care prevention worker etc.): 7
Work Period in Child Welfare Services	3 months to 38 years Mean: 14.6 years
Service Region (Virginia)	Northern: 5 Piedmont: 12 Central: 8 Western: 6 Eastern: 5
Total	36

Although I fully explained how I identified and then categorized meaning units, key themes, and categories in section 3.2.2 of Chapter 3, I will briefly reiterate the main points here. Qualitative content analysis went through several stages: raw data, condensed text, meaning units, key themes (codes), and categories. While my approach to content analysis is mainly an interpretative approach of inductive reasoning, when identifying themes that seemed meaningful to the producers of each comment, some combination of both inductive and deductive approaches were used. In order to increase the trustworthiness of the qualitative findings, I tried to 'let the text talk' and not to impute meaning not expressed by the interviewees.

The interviews (A) were read through several times to obtain a sense of the whole. Then the text dealing with the participants' understanding of accountability, performance, and accountability management was extracted and brought together into one text (B) respectively. Having sorted classified meaning units thoroughly (C), the condensed meaning units were abstracted and labeled with a key theme (code) (D). As an example, from a verbatim data "Simply put, accountability means having people who oversee you to whom you must give answers and explanations" (A), a meaning unit of "Give answers and explanations" (B and C) is condensed. Then, a key theme of "explanations" is labeled (D).

While the key themes were usually generated from exact quotes from interviewees (e.g., "Timely" and "Decision" for the concept of accountability), a few were created as a metaphor (e.g., "Responsibility" for the concept of accountability; see Table 3 in section 3.2.2). I generated the category names, used to identify grouped key themes (labeled (E) in Figure 3). Most labels assigned for categories were drawn from the existing literature with some exceptions. New labels were characterized by key themes when they did not accord with the previous frameworks. For instance, most labels of accountability and performance are taken from the literature, whereas "communication strategy" and "information strategy" in the accountability management were created based on the interview transcripts. The tentative categories were discussed and revised by two raters (a colleague and myself) to ensure the most probable interpretations. A process of reflection and discussion resulted in agreement about how to sort the codes and categories. In addition, a review of literature related to the key themes identified phenomena that seemed to serve as relevant headings to unify the key themes into categories.

It should be acknowledged that even though the labels were drawn from the literature, the coding process was not deductive. Mainly, I extracted the codes inductively with minimal

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guidance from the literature, and then I assigned the category name, which represented the characteristics of classified key themes.

4.2. Accountability and Performance in Child Welfare Services

This section first identifies categories (dimensions) of accountability and performance and discusses what constitutes accountability and performance. Based on the each characteristic derived from the interview data, I compared accountability with performance (section 4.2.1). Building on those findings, further discussions are focused on the meaning of accountability and performance, formal and informal accountability, and the importance of accountability to caseworkers (section 4.2.2).

4.2.1. Dimensions of A and P

What are accountability and performance? While not all text collected from the interviews was pertinent, each meaning of accountability and performance contained multiple dimensions. Also the two concepts offered similarities as well as differences. Table 6 and Table 8 below report the results from the qualitative content analysis regarding what accountability and performance mean in the context of child welfare services. Accountability includes the key themes of 'action,' 'decision,' 'following policy and guidance,' 'completing the work,' 'responsibility,' 'serving children and families,' 'explanations on the job,' 'ethics,' and 'values' (Table 6). Performance involves the key themes of 'serving children and families,' 'following policy and guidance,' 'completing the work,' 'professionalism,' 'plan,' 'outcome,' 'best services,' 'team playing,' and 'ethics' (Table 8). I will examine each concept in detail, below.

Accountability Requirements

To begin with, the characteristics and dimensions of accountability requirement are identified. Some key themes are included in multiple categories. For example, "responsibility," which is classified under legal accountability, is represented with terms such as "fulfilling" and "task," is also used with words like "quality" and "community" within the political accountability category.[80] Except for this case, key themes are sorted out distinctively.

Child welfare caseworkers in Virginia perceive accountability in diverse ways. They are pressured to follow guidance and policy and to pursue organizational goals. They maintain enough knowledge for their role and management (*hierarchical accountability*). Caseworkers are also expected to complete their job according to the law and procedures (*legal accountability*). They also face a political accountability requirement. For example, they give answers and explanations on what they did. Their goal is serving children and families since they are public child welfare service providers (*political accountability*).

Informal accountability requirements are also prevalent in caseworkers' professional environment. These informal requirements are less easily defined but form the basis of their decisions and therefore are important part of job success. They are required to be responsible for their actions and decisions and also to be professional and effective (*professional accountability*). In addition, child welfare caseworkers must have ethical standards and integrity (*ethical accountability*).

In short, hierarchical, legal, political, professional, and ethical accountability requirements are identified within the child welfare services. Despite the fact that the coding process was driven by the researcher's own inductive approach with other raters, the findings fit well with the

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[80] This is not unexpected since the term "responsibility" is a frequently discussed theme in public administration with "accountability" and even with "performance" (Bergsteiner & Avery, 2003).

accountability typologies of Romzek and Ingraham (2000) and Romzek and Dubnick (1987). While Romzek and Dubnick's frame usually includes "ethics" in professional accountability, ethical accountability is identified as an independent category in my study. The reason for this was that ethical accountability included strong features and characteristics of its own.

Table 6: Categories of "Accountability Requirements"

Key themes	Category
Doing (2)/ Action (9)/ Decision (3)/ Effective (1)/ Professional (2)/ Better job (3)	*Professional Accountability*
Following (3)/ Goals (2)/ Timely (1)/ Reporting (2)/ Knowledge (2) / Guidance (3)/ Policies (4)/ Role (3)/ Management (3)	*Hierarchical Accountability*
Procedures (2)/ Fulfilling (2)/ Completing (4)/ Job(Task) (4)/ Law (3)/ Responsibility (12)	*Legal Accountability*
Explanations (2)/ Expectations (2)/ Quality (1)/ Responsibility (6)/ Community (4)/ Service, Serving (10)/ Mistakes (1)/ Blame (1)/ Money (1)/ Children (6)/ Families (3)/ People (6)/ Society (5)	*Political Accountability*
Owning (2)/ Ethics (4)/ Values (3)/ Right (1)/ Integrity (2)/ Honest (1)/ Word (3)/ Respect (1)	*Ethical Accountability*

Note: See Appendix F for "Meaning Units" from which I extracted categories.
Parentheses denote the number of times the word used.

Child welfare caseworkers face multiple accountability demands. Throughout the interviews I identified several sources of accountability requirements and asked interviewees to rank their importance. Table 7, below, shows the list of the sources of accountability that child welfare caseworkers are required to respond to and the level of perceived importance. Caseworkers perceive multiple accountability sources to be "very important" with somewhat different magnitudes of importance: political accountability (the children and families they serve and quality services), professional accountability (themselves), legal accountability (court

decisions, state policy), and hierarchical accountability (supervisor). Child welfare caseworkers perceived the children and families they serve, quality service, themselves, and court decisions as most frequently demanded and important sources of accountability. Supervisors, state policy, coworkers, agency rules and so on, were also significant sources of accountability requirements. Local cost of providing services, State legislative oversight and budget, and interest groups all turned out to be less important to caseworkers. This finding, firstly, gives us a tentative estimate of the level of Importance relative to other aspects of accountability. Second, this will be considered later when comparing the causal relationship between A and P.

Table 7: The Importance of Accountability Requirements for Child Welfare Workers

	Source	1) not important at all	2)	3)	4)	5) very important	Total Responses	Mean	Median
Very Important	The children you serve	0	0	1	2	31	34	4.88	5.00
	Quality of service	0	0	1	2	29	32	4.88	5.00
	The families you serve	0	0	1	4	29	34	4.82	5.00
	Yourself	0	0	0	6	26	32	4.81	5.00
	Court decisions	0	1	0	6	26	33	4.73	5.00
	Your supervisor	0	0	3	6	24	33	4.64	5.00
	State policy	0	0	1	10	21	32	4.63	5.00
	My coworkers	0	0	2	9	21	32	4.59	5.00
	Agency rules	0	0	2	13	17	32	4.47	5.00
	Your profession/ professional norms	0	1	3	8	20	32	4.47	5.00
	The community	0	0	6	7	19	32	4.41	5.00
	Case procedure	0	1	4	10	17	32	4.34	5.00
Important	Local cost of providing services	1	2	4	15	10	32	3.97	4.00
	State legislative oversight actions	1	4	4	12	11	32	3.88	4.00
	State legislative budget	2	4	4	12	10	32	3.75	4.00
Less important	Interest groups	5	8	6	9	4	32	2.97	3.00

Performance

Performance was also understood to have multiple aspects. Child welfare caseworkers understand performance as serving children and families, following policy and guidance, outcome, completing the work, best services, professionalism, plan, team playing, and ethics. Based on the classification of these key themes, four categories of performance are established (Table 8). They pursue *service effectiveness* by serving children, making sure children are safe, and by following guidance and policy. Caseworkers also try to keep their work *efficient*. They do their best to bring out best outcomes and productivity, for example, through timely completion of work tasks. Moreover, they conduct themselves in a *professional* manner for better performance. Being prepared with a plan, skill development, and teamwork are critical aspects of this professionalism. They are willing to entertain new ideas and strategies.[81] Finally, child welfare caseworkers maintain a strong work ethic and integrity, which leads to a good casework and, in turn, good performance (*fairness*). These categories, as I acknowledged before, may not be a perfect fit for all content (key theme), which implies that there exists a likelihood of overlapping between categories. For example, some researchers might integrate "professionalism" with either effectiveness or efficiency since professionalism seems to support these values.

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[81] For instance, one caseworker explains in this way: "Generally my strategy is to gather all of the information that I need (do my homework), schedule a meeting to discuss the issue, review all options/action plans, and develop a plan or solution that everyone can live with."

Table 8: Categories of "Performance"

Key themes	Category
Client (1)/ Serving children (10) and family (9)/ Safe (3)/ Effective (2)/ Performance (11)	*Service effectiveness*
Following policy (7)/ guidance (3)/ Mandates (1)/ Statue (2)	
Time management (1)/ Liaison (1)/ Corrections (1)/ Productivity (2)/ Efficiency (2)/ Outcome (3)	*Efficient work and Responsibility*
Schedule (2)/ Timely response (5)/ Timely (8) work (19)	
Paperwork (2)/ Best services (5)/ Completing work (4)/ Responsibility (2)	
Professionalism (4)/ Acting appropriately (2)/ Profession (3)/ Being prepared (2)/ Plan (5)	*Professionalism*
Skills (2)/ Knowledge (3)/ Strategy (1)/ Solution (1)/ Learning (2)	
Team playing (3)/ Member (2)/ Coworkers (1)	
Fairness (2)/ Respectfulness (1)/ Ethic (2)/ Integrity (1)/ Good (1) casework (10)/ Reliable (1)/ Best effort (2)/ Owning (1)	*Fairness/ Values*

Note: See Appendix G for "Meaning Units" from which I extracted categories.
Parentheses denote the number of times the word used.

Similarities and Differences between A and P

The results support the argument that accountability and performance for street-level workers is multi-faceted due to conflicting goals and mandates imposed upon them by their own organizations, systemic rules, procedures, as well as those of their clients (Hupe & Hill, 2007). So, how do accountability and performance compare in practice? While they share certain common key themes, they also have different characteristics. I present a diagram of the relationship between accountability and performance below (Figure 5). In terms of responsibility, serving the children and families, following the policy and guidelines, completing the task, and ethics, both may be used interchangeably in practice. This evidence offers the possibility that improving performance may enhance accountability and vice versa.

Figure 5: Characteristics of Accountability and Performance
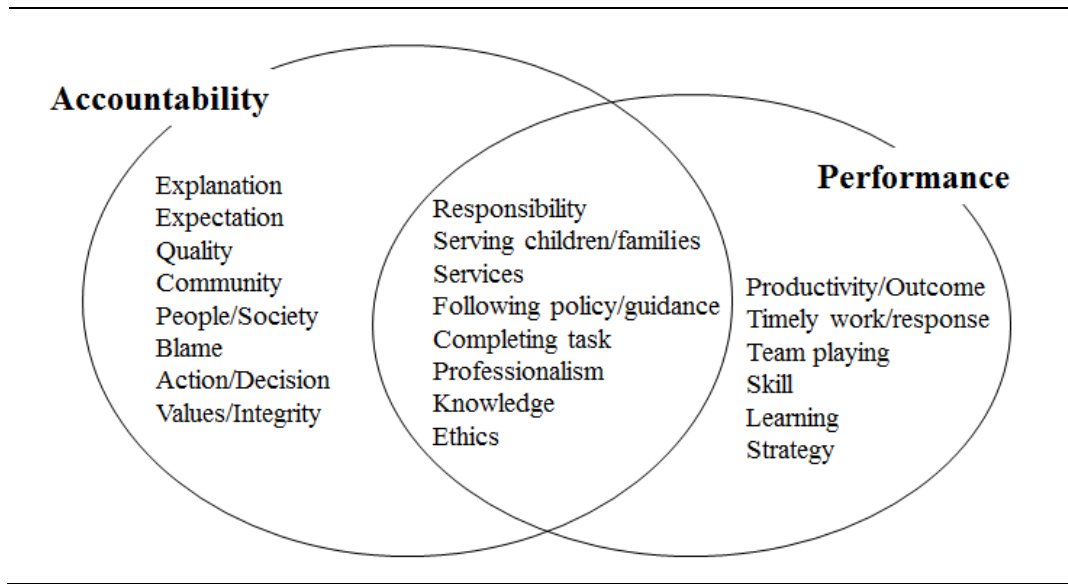
It should be noted, however, that there are discrepancies in the understanding of accountability and performance, at least according to child welfare caseworkers' perceptions. Interviewees revealed somewhat different characteristics when they considered accountability and performance respectively. Aside from the common key themes (intersection in Figure 5), accountability can also be understood with the key themes of explanation, expectation, people/society, action/decision, and values. Conversely, performance was about productivity/outcome, timely work, team playing, learning, and strategy. This finding in part provides us with a reason why we still observe a lack of meaningful improvement in organizational performance while witnessing an expansion of arrangements or reforms to ensure accountability.

While these finding support the incompatibility between accountability and performance (Behn, 2001; Halachmi, 2002a), this interpretation should not be overstated. First, we do not know within this study exactly the magnitude of similarities and differences between accountability and performance. In other words, this study is limited in the extent to which it can

show the level of importance of the similarities and the differences. Second, the findings are based on the content analysis of qualitative data (interviewees' statements), which implies that the findings are not scientifically rigorous. Therefore, it is not possible to draw a conclusion that accountability and performance are different from each other. Nevertheless, it is fair to say that the incompatible characteristics found between accountability and performance may give us an idea of the problem underlying performance-driven accountability or managing for results (Brodkin, 2008).

4.2.2. Further Discussion

The interview data reaffirm the potential tension between the requirements of accountability and those of effective administrative action (Barberis, 1998; Behn, 2001; Bouckaert & Peters, 2002; Bovens, 1998; Deleon, 1998). They help us to understand further the concept of accountability and performance in terms of their similarities and differences. These findings are exploratory and may be limited in generalization. Nevertheless, being explicit about what constitutes accountability and performance is definitely significant in public management. Implementing public policies and programs with high accountability demands for performance is more difficult than it seems. Further discussions on accountability and performance are presented in the sections that follow. To understand who is speaking in the interview data, the interviews are referred to as either, "Interviewee" (caseworker) or "Supervisor"[82] with numbers (e.g., Interviewee 1, Interviewee 2… and Supervisor 1, Supervisor 2…).[83]

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[82] The quotes from supervisors and directors are from the informal conversation conducted in 2012.
[83] To protect confidentiality of the study participants, names of interviewees and interview dates are not specified throughout the dissertation.

What do accountability and performance mean?

While accountability is traditionally defined as reporting on the actions of an organization or an individual as they relate to the directives of a higher authority, practice shows that the process of accountability is carried out with considerably less precision, and in increasingly complex environments (Radin, 2006). One interviewee [Interviewee1] illustrates diverse accountability requirements very clearly by referencing response time, the courts' expectations, statistics, and reviews:

> We have expectations to meet specific to our work such as response time, timely closing of cases, timely and correct notifications to individuals. We also have expectations from the courts on cases where legal action was initiated by our agency. These include court reports, testifying, etc. Statistics are kept of each worker and also each agency across the state of how we meet the state expectations. If these numbers are not at acceptable levels, it could mean a low job performance and demotions or less monetary rewards (when we do get raises!). The court expectations are more difficult as we are accountable to the courts in documenting our actions and defending why decisions are made etc. … We further have reviews from the regional administrators. They pull cases for review and sometimes we have to defend our work. Errors in this could result in decisions being overturned which again could mean sanctions and reflects negatively on the agency (Interviewee 1).[84]

This statement concerning the dimensions of accountability represents a complicated web of expectations (Romzek & Ingraham, 2000). Aside from identifying the dimensions, I also observed that the concept of accountability has a somewhat different meaning to different people. For example, one might comprehend accountability in a formal way while another might describe it in ways that are closer to a conceptualization that focuses on meeting the needs of the public. One case supervisor at VDSS reports: "Accountability in CPS program is to ensure the initial and ongoing safety of children and they may be held accountable to the extent for which

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[84] The all excerpts are *verbatim* as I already noted in Footnote 44 in Chapter 3.

the code and policy allow for intervention" (Supervisor 1). Another states it this way: "Each position in this agency has accountability to the community. Our supervisors work to ensure we are *meeting the needs of the citizens*" (Supervisor 2, emphasis added). The bottom line concerning accountability is whether 'decision making' is undertaken with the best interests of the child in mind, as one front line worker emphasizes—"Is the decision you made about leaving a child in a home, for example, the correct one? These decisions are made by staffing cases with other team members and supervisor" (Interviewee 2).

Performance is also revealed by two different views among interviewees while child welfare caseworkers relate their performance to 'quality services through serving children and family' in general. Some have a tilt toward the community whereas others are emphasizing the rules and processes when they pursue performance. For example, one worker says: "I feel that good performance in any position [in] this agency is *doing your job efficiently and effectively* in order to provide *quality services* to the community" (Interviewee 3, emphasis added). Conversely, the other emphasizes the rules and policies to follow. A caseworker [Interviewee 4] illustrates performance more specifically:

> Additional workers would lower caseloads and allow for greater family
> interaction/treatment while also allowing paperwork deadlines to be more effectively
> satisfied. CPS policy is routinely updated to include additional areas of identified concern
> while the State does complete Quality Service Reviews to better guide and improve the
> child welfare process (Interviewee 4).

In sum, Virginia child welfare workers' concepts of accountability and performance lie between the policies and rules they are required to follow and their aspiration to be responsive to the community. The statements from the interview data accord with the street-level workers'

behavior that Lipsky (1980) portrays: Street-level work lies between the responsiveness to political goals and the individual's judgment.

Formal and Informal accountability

Although several conceptions of accountability are identified in the child welfare service context, caseworkers face formal and informal accountability demands more generally. Maynard-Moody and Musheno (2003) discuss the dynamics of formal and informal aspects in terms of "legal abidance" versus "cultural abidance." Formal accountability indicates state policies, while informal accountability usually relates to professional norms. Sometimes the two types of accountability conflict and one is discarded for the other (Romzek, LeRoux, Johnston, et al., 2012). Several interview participants explain formal and informal accountability in their work environment: "Formal accountability is where we must follow state policy. Informal accountability is where we are expected to perform our duties in a professional and courteous manner" (Interviewee 5). Another interviewee [Interviewee 6] notes that:

> Former [Formal] accountability is the numbers. How quickly one responded, if correspondence was sent timely and correctly. These are easily defined and recognized. However they do not address the more subtle nuances of a case. Informal accountability still comes down to child safety. … Sometimes it [the decision] is just the history we have with a family. While we may recognize a situation as unsafe or even as safe, an outsider may not understand how we made this decision looking at it on paper (Interviewee 6).

While respondents' views indicate that there might be either subtle or straightforward tension between formal and informal accountability, another describes the importance of both accountabilities: "Both forms [formal and informal] of accountability are met daily, and both have a very important and specific function" (Interviewee 7). Although most interviewees admit

the importance of balance between formal and informal accountability, informal accountability is manifested in their decision-making. One interviewee [Interviewee 8] elaborates in detail:

> I think both are important but on a daily basis it is the informal expectations that are more prevalent. … I think the informal are more important to the bottom line because again it is about decisions regarding child safety and sometimes it cannot be easily determined in a formal setting. In that way, it is more important for job success. It is also what allows you to handle the job emotionally. … From the formal accountability, I guess they would define success as having positive numbers in terms of getting things done timely and accurately. But the difference is people vs. policy. We have to focus on the individuals we serve, not the numbers or policy (Interviewee 8).

This statement affirms the recent rise of concern for informal accountability (Romzek, LeRoux, Johnston, et al., 2012). However, in the context of the current study, it is unclear whether the importance placed on informal accountability is based on their hope for future or on the current reality. Whichever it is, street-level workers are facing critical informal accountability demands (Meyers & Vorsanger, 2003). In general, however, child welfare caseworkers confront both formal and informal accountability requirements: professional, hierarchical, political, legal, and ethical accountability (Koppell, 2005).

The Importance of Accountability

I discussed what kind of accountability demands child welfare caseworkers feel pressured to respond to in their daily activities, what accountability means to them, and to what extent each source of accountability is important. This section discusses how accountability demands affect their activities. This question is important because by understanding this, we can estimate the role of accountability in performance qualitatively. In addition, we can figure out the role of

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caseworkers in child welfare program improvement, which is rarely studied in the literature, compared to the role of managers (Huntington, 1999; Wells, 2006).

First of all, accountability requirements keep child welfare caseworkers in line with what they are supposed to be doing. For example, it calls attention to the purpose of the job and to whom they are responsible and accountable. Interviewees [Interviewees 9 and 10] explain that:

> The various accountability requirements make for more paperwork and force us to put more time and consideration into every decision we make. Seeking support and advice from coworkers and supervisors constitutes a large portion of my day (Interviewee 9).

> If no one is accountable, nothing gets accomplished. Therefore, I must be accountable to everyone I supervise as well as to those "above" me in all levels of the Department of Social Services and to the community. Therefore, I have to stay organized, set priorities, educate myself and my workers on policy and procedure changes, and monitor the staff I supervise so that we are meeting the vision of our local department to serve those in need in our community (Interviewee 10).

Second, accountability enables a worker to comprehend how to go about his or her work. It guides decisions. In addition, accountability requirements influence how caseworkers prioritize certain tasks and how much time they can devote to certain tasks. For instance, one caseworker says that "They influence how I prioritize certain tasks and how much time I can devote to certain tasks" (Interviewee 11).

Third, accountability provides checks and balances to ensure caseworkers are doing the best job that they can (S. E. Kim, 2005). Other caseworker points out that "It helps with checks and balances to ensure I am doing the best job that I can" (Interviewee 12). It makes a caseworker work harder and be more diligent in doing the best he or she can. While accountability is a good standard to motivate child welfare workers do their job in general, some complain about lack of incentives. One CPS caseworker [Interviewee 13] states that:

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I want to be the best I can be at my job and I strive for this daily. Personal satisfaction knowing that what I do is my best is part of my reward for the work I do. But sadly this is not always enough for social workers. We receive very little positive feedback from clients and other professionals and very little compensation for the work we do (i.e. salaries, benefits, etc.). Because of this it can be difficult at times to find reward in what we do and that may influence some workers accountability to themselves as well as others (i.e. the state, agency, clients, etc.) (Interviewee 13).

Summary

The content analysis finds overlapping concepts as well as distinctions between accountability and performance, which implies that careful attention is needed in the design of accountability mechanisms and performance measurement. Every case is different and every choice is, in part, based on being accountable to some rule, some regulation, and/or some authority in the work. Without a precise sense of both values, public organizations are likely to fail to meet the political expectations as well as higher performance outcome. In addition, formal and informal accountability should be clearly studied for better understanding and implementation of accountability systems. Further, throughout this investigation, I found that accountability significantly affects the role of child welfare caseworkers and they usually consider multiple accountability requirements in a positive and constructive way. Yet, motivation and incentives were somewhat critical for caseworkers to maneuver between the stress and tension arising from accountability requirements. The results call for future studies on this theme.

4.3. Accountability Management in Child Welfare Services

Multiple accountability requirements are identified in the child welfare service context (see Table 7). While caseworkers understand accountability in positive ways (see section 4.2.2), most

interviewees answered that they encounter conflicts among accountability requirements (S. E. Kim & Lee, 2010).[85] Caseworkers also acknowledge the importance of accountability management, and it matters in their daily practice with some variations. So, how do they conflict? And how do child welfare caseworkers manage or cope with these conflicting accountability requirements?

4.3.1. Conflicting Accountability Requirements

The most frequent and important conflicts reported by the child welfare caseworkers were conflicts between policy and practice. Courts, budgets, and administrative procedures might also conflict with caseworkers being held accountable to families and children. I will discuss some other minor conflicts.

First and foremost, there are times when policy or funding restrictions preclude caseworkers from helping a client or doing exceptional work. Although state laws are intended to serve the citizens, they are sometimes in conflict with the best interest of children when actually practiced. A good example of this phenomenon is the recent requirement that caseworkers no longer make unannounced visits for family assessments. One interviewee explains this awkward demand, "If the allegation is related to supervision or a dirty house, what are the odds that a family will allow a visit if there is not supervision or a clean house? This just makes it harder to document issues and create change for children" (Interviewee 15). Similarly, for ensuring accountability to the people child welfare caseworkers work with (families, children, et al.), compared to regulations or co-workers, caseworkers strive to maintain quality service and make

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[85] Some respondents expressed no conflicts, arguing that the bottom line is they practice "best policy" that is stipulated by code and ensures children's safety. One of them stated: "I do not feel that there is a true conflict. One example concerns funding of services. Our agency is responsible for providing families with quality services, however is also accountable in making good decisions regarding the cost of services and not spending funds on services that may not be needed" (Interviewee 14).

the right decisions; sometimes they must err on the side of safety, which may not meet the policy direction.

Two interviewees [Interviewees 16 and 17] spoke about these issues:

Many of the standards are set without any or little consideration on what it actually takes to accomplish tasks and are arbitrary as to what must be done to help the client and only serve to meet some standard of conformity between agencies (Interviewee 16).

The legislature wants to talk quite a lot about taking care of children, but they consistently pass legislation which eats away at the protection of children – i.e., this year's newly passed bill which prohibits agencies from interfering in a family's fundamental right to direct the upbringing of their child. No substance, just a bunch of words, but the very premise of it will make it a bit more difficult for CPS to make a case that a parent is mistreating a child - one more hurdle to cross that may interfere with child protection. The legislature refuses to provide adequate pay to attract and keep excellent workers (Interviewee 17).

Second, budgets, court decisions, administrative procedures and oversight can often conflict with caseworkers being accountable to families and children. Some state mandates or budget requirements can make it hard to provide the most beneficial services to a family. The biggest conflict is between funding policy and meeting clients' needs (which falls in line with caseworkers' own professional standards). Often times, funding policy requires child welfare caseworkers to reduce a service or provide it in a way that they do not think will best meet their client's specific needs. Or funding policy is so time-consuming that it takes months for them to get the service in place to support the client. When dealing with crisis situations, waiting even one week to get a service started is less than ideal.

At times, caseworkers' professional values and the organization decisions conflict. For example, the courts sometimes override what social workers think is best for the child and/or

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family. Also, having to meet certain deadlines can make it so caseworkers are more focused on state deadlines as opposed to being able to focus on the real work that brings about change.

Third, sometimes what is best for the child is not what is best for the entire family. For example, sometimes a child needs to be removed so that he/she can receive intensive psychological treatment, but removing a child tends to cause a lot of stress and heartache for the family as a whole. One caseworker [Interviewee 18] explains this:

> Sometimes doing what is best for a child (coming into custody of DSS or under the protection of a protective order) is not seen as the best action by the parent, who does not want to change their behavior or submit to monitoring, therapy, or whatever the Court orders, or by the community, who may not be satisfied either because DSS intervenes or because they do not intervene enough, but our obligation is to do what is best for the child (Interviewee 18).

Families often have a different perspective on their needs as well as the need for agency involvement. These conflicting views can heavily influence a worker's ability to work with a family and to get the family to participate in services.

Finally, the interview data reveal some minor conflicts. Community values and court decisions often conflict. The community may not realize that the agency has to work within the laws of Virginia and abide by decisions of the court. In addition, interest groups may also not understand the work that caseworkers do on behalf of children. Furthermore, the community perception that children need to be removed from their abusive family conflicts with what local departments of social services are able to do.

One practical implication of these conflicts is that they should be minimized at all costs in a constructive way, as interviewees point out. One way seems to be increasing the congruence between the state and its workers in terms of goals, agendas, and directions. Interview

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participants argue that if the State agenda does not clearly become their agenda in service provision, they are likely to feel little accountability to the State as a worker. With respect to these conflicting accountability demands, I find that Courtney (2000) had a useful insight on the child welfare system:

> In many ways the child welfare system . . . is one huge experiment that has been conducted on children and families over a period of many decades at a cost of untold billions of dollars . . . Unfortunately, after decades of this grand experiment the field of child welfare has little conclusive to say about the comparative benefits of any of its interventions or the quality of decision making engaged in by those operating the child welfare system (p. 745).

4.3.2. Accountability Management

Most study participants agreed that their jobs are a balancing act that must take several factors (budgets, state policy, court rulings, supervisor's opinion, and their own opinion) into account at once, even if they contradict each other (Hupe & Hill, 2007). As an entity providing coherent policy to the citizens, they emphasize consistency in decision-making with respect to accountability issues. For example, one foster care worker [Interviewee 19] elaborates that:

> My personal convictions may conflict with State policies, court decisions and decisions made by my supervisor or Director, but I have respect for all of these entities because there must be consistency in how matters are handled to avoid our personal feelings making decisions for us. Laws, rules and procedure are designed to maintain order and fairness among everyone regardless of their individual differences in areas such as in sex, race, age, faith, or socioeconomic level (Interviewee 19).

So how do they manage multiple accountability demands? Is there any pattern from their perceptions and reports? This investigation helps inform the development of accountability management theory. How do caseworkers manage diverse accountability requirements identified

in the child welfare service context? Accountability management by public managers involves identifying, defining, and managing diverse expectations placed upon them by internal and external stakeholders.

Table 9 below shows the result of multiple strategies for accountability management that caseworkers use: *discretionary, compliance, communication*, and *information strategies*. While the terms "discretionary strategy" and "compliance strategy" are adopted from Kearns (1997), the other labels ("communication" and "information strategy") that I created are based on interview transcripts. Like the findings on the dimensions of accountability and performance above, these categories of strategies are not clear-cut, and thus the ability to generalize the results is limited.

When child welfare caseworkers confront multiple accountability expectations, they may use some mixture of four separate strategies. First, they find the best interests of the child and the child's safety when they fall into conflicts between the sources of accountability. They also use an ethical code or their professional norms to inform their judgment (*discretionary strategy*). One interviewee says that "Sticking to the facts and professional judgment is the best route" (Interviewee 20). These characteristics resemble the contents of "discretionary strategy" of Kearns (1997). A discretionary strategy involves determining the latitude for discretionary judgment. Second, caseworkers consider following policy and guidelines as an important accountability management strategy. For some caseworkers, following policy is a best way to be guided or way to resolve the conflicts (*compliance strategy*). A study participant says, for example "I generally try to sit back and think and research what policy says verses in-house policy and attempt to resolve the conflict in my head" (Interviewee 21). This strategy accords well with a compliance strategy of Kearns (1997), which involves adhering to the law. Third,

child welfare caseworkers use *communication strategy*, which means communicating and consulting with supervisors or regional specialists. One notes "I use my supervisor as a resource in helping me sort through how to balance accountability requirements. My supervisor helps me talk it through and weigh it out" (Interviewee 22). It is noted that child welfare caseworkers use consultations mainly when accountability demands conflict each other in their work.[86] Last, they sometimes seek out information from outside organizations (*information strategy*). A caseworker demonstrates that "It is important to be transparent and to let others know that in this particular case, the law is a barrier to the best interest of a child. I consult with all who are involved and will seek legal counsel if necessary" (Interviewee 23).

Table 9: Categories of "Accountability Management"

Key themes	Category
Interest of child (9)/ Ethical code (2)/ Customer (3)/ Decisions (12)/ Facts (2)/ Professional (6)	*Discretionary Strategy*
Following (3)/ Policy (10)/ Guidelines (7)	*Compliance Strategy*
Communication (4)/ Consultations (5)/ Talk (3)/ Supervision(2)/ Supervisor (4)/ Coworker (2)/ Speak out (1)/ Regional specialist (3)	*Communication Strategy*
Education (2)/ Listening (1)/ Learning (3)/ Information (5)	*Information Strategy*

Note: See Appendix H for "Meaning Units" from which I extracted categories.
Parentheses denote the number of times the word used.

As described in Chapter 2, accountability management strategies were open to be developed within a child welfare context. Some strategies affirm previous studies; the others establish Virginia child welfare caseworkers' specific strategies. In my estimation, these

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[86] This interpretation is based on the magnitude of respondents' statements.

strategies are not clearly distinct from each other. Instead, they may blur into each other (Bryson et al., 2010).

Most interviewees felt conflicts among accountability requirements and acknowledged the significance of accountability management. One caseworker's response is representatively displayed: "Accountability management is extremely important for the role of each person in this agency. Everyone that works here as a certain duty that if not done correctly and efficiently negative outcomes would occur" (Interviewee 24). The accountability management perspective can be understood and operationalized as a strategic perspective. In order to manage accountability, child welfare caseworkers have a strategic sense of work behaviors. Four strategies are preliminarily identified. I found evidence of the utility of accountability management from the interview data. One of the caseworkers confessed "there is no competition between agency direction and clients' values when we are managing accountability well" (Interviewee 25). Figure 6 depicts the preliminary model as to how accountability management plays a critical role and caseworkers' efforts to drive their services toward successful outcomes in serving children in need.

Figure 6: Accountability Management
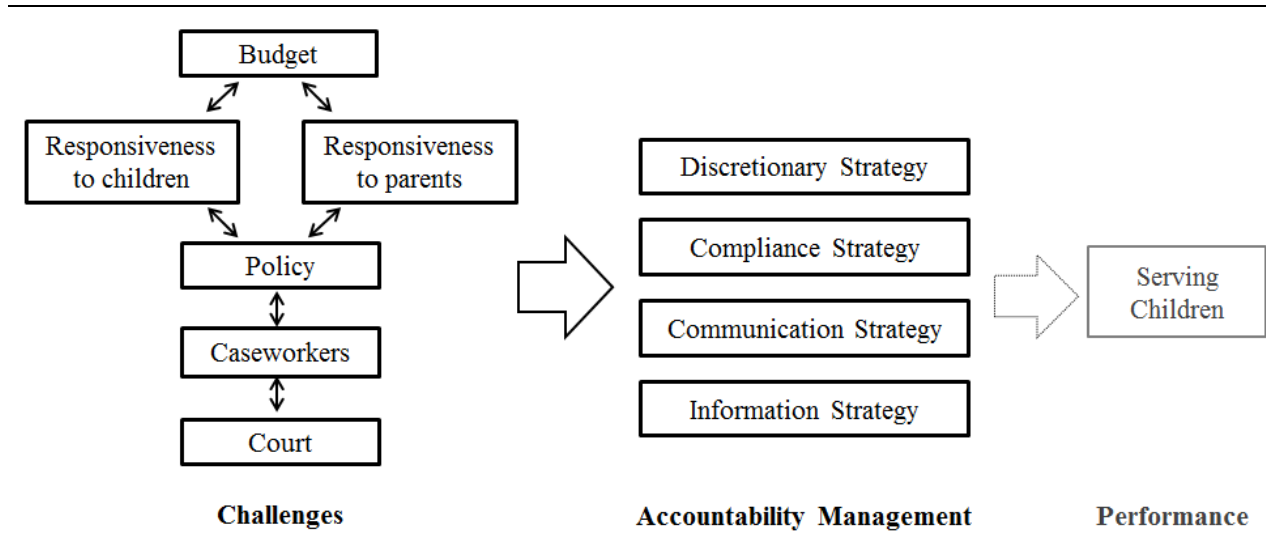
4.4. Summary of Making Sense of A and P

This chapter provided an exploratory analysis of administrators' perceptions of accountability requirements, their alignment with performance, and their accountability management strategies in the context of child welfare services provided by the Virginia Department of Social Services.

Child welfare caseworkers (front-line workers) face multiple and conflicting goals and mandates imposed upon them by their organizations, systemic rules, procedures, their clients, and their own professional norms (Romzek, LeRoux, Johnston, et al., 2012). This is the case when observing the evidence of multiple dimensions of accountability and performance. Accountability can be understood by key themes such as responsibility, action, decision, guidance, policies, law, community, job, completing, explanations, expectations, quality, owning, ethics, and values. These key themes produce five accountability categories when they are grouped: (1) professional accountability, (2) hierarchical accountability, (3) legal accountability, (4) political accountability, and (5) ethical accountability. These accountability demands

significantly affect the role child welfare caseworkers play and they usually consider multiple accountability requirements in a positive and constructive way.

Although child welfare caseworkers confront both formal and informal accountability, the analysis shows the increasing informal accountability demands on child welfare workers such as communication, peer reviews, professional judgment, understanding people, their experience, and the history with a family. The increasing emphasis on informal accountability requirements can be attributed to skewed performance measurement. As one caseworker points out that "While we may recognize a situation as unsafe or even as safe, an outsider may not understand how we made this decision looking at it on paper" (Interviewee 26), the nature of their work is very subjective and implicit.

Performance can be considered with key themes such as serving children and families, following policy guidance, productivity, outcome, professionalism, skills and learning, team playing, plan, and respectfulness. From these keywords, I established four performance dimensions: (1) service effectiveness, (2) efficient work and responsibility, (3) professionalism, (4) fairness and values.

I observed that there is common ground as well as discrepancy between accountability and performance. In terms of responsibility, serving the children and families, following the policy and guidelines, completing the task, and ethics, both may be used interchangeably in practice. Aside from the common key themes, accountability can be better understood with the key themes of explanation, expectation, people/society, action/decision, and values. Conversely, performance is more concerned with productivity/outcome, timely work, team playing, learning, and strategy. Mapping out the characteristics of accountability and performance will help public

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managers to develop strategies, policies and procedures to find the best way to achieve higher levels of performance and desired results.

Most of interviewees showed that they felt conflicts between accountability requirements and acknowledged the significance of accountability management. The policy and the practice conflict each other and the court, budget, and administrative oversight also conflict with caseworkers being accountable to families and children. Accountability management, which is a novel concept in the public management literature, is preliminarily identified.

Even though the interpretation might be limited, I believe the findings in this chapter provide an exploratory account of *what accountability is, what performance is, and how caseworkers manage*. These findings may help practitioners to develop well-identified and defined accountability and performance systems. Future studies should utilize and refine the key themes and categories identified in the analysis. Moreover, more specific research design is needed, where this study was limited, regarding the magnitude of the similarities and differences between accountability and performance. The discussion of accountability management in this chapter may well encourage more research in this area.

CHAPTER 5. IMPACT OF ACCOUNTABILTIY ON PERFORMANCE

Chapter 4 analyzed the interview data collected in the first phase of my study. It identified several dimensions of each concept (accountability, performance, and accountability management) qualitatively. This chapter (covering the survey data collected in phase two of the study) builds on and reinforces the findings of Chapter 4, and quantitatively investigates the causal relationship among identified factors.[87] The main purpose of this chapter (and throughout the dissertation) is to gain a better empirical understanding of the impact of accountability on performance, and on accountability management's mediating effect at the street-level. Empirical studies have identified several positive effects of accountability (Bouckaert & Halligan, 2008) while undesirable effects of accountability also have been uncovered (P. Smith, 1995).

How do accountability (A) and accountability management (M) impact performance (P)? My approach is somewhat similar to a "model development strategy" rather than a "confirmatory modeling strategy" (Hair et al., 2010, p.628-629). In other words, the AMP model is novel since the strictly specified relationships between A, M, and P have not been developed in the public management field. Hence, the study objective of this chapter will be the discovery of the relationship. The data were analyzed using exploratory factor analysis (EFA), confirmatory factor analysis (CFA), and structural equation modeling (SEM) with software of SPSS (ver. 16.0) and AMOS (ver. 16.0).

The analytical procedure is outlined briefly. First, survey data are introduced and the characteristics of survey participants are described (section 5.1). Next, data are examined in

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[87] The dimensions of accountability, performance, and accountability management analyzed in Chapter 4 are subject to change because of the statistical techniques applied in the process of model specification.

order to check violations of the statistical assumption that may cause biases in the results (section 5.2). Once I checked the data and remedied violations, I ran a factor analysis (section 5.3),[88] whose "primary purpose is to define the underlying structure among the variables in the analysis" (Hair et al., 2010, p. 94). I first constructed a measurement model for theoretical concepts with multiple observed indicators using EFA (section 5.3.1). As an example, observable variables A, B, and C can build an unobservable (latent) factor D (construct).[89] CFA is performed to test if the indicators (observable variables) load significantly onto the underlying factor (construct) in the specified measurement model (section 5.3.2). Lastly, the SEM constructs a hybrid model that incorporates the CFA-tested measurement models and the structural relationships among the independent variable, the mediator, and the dependent variable (section 5.4), which is followed by discussions (section 5.5).

In short, I followed a two-step approach (Anderson & Gerbing, 1988) to explore the AMP model. I conducted CFA to assess the factor structures of the latent variables (to check *construct and discriminant validity*) that were derived through EFA. After the process of CFA, I was able to conduct SEM analysis with the large-*N* data to examine the AMP model. Measurement model with CFA aims to build a statistically strong and data-fit model; SEM examines the causal relationship in the established model.

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[88] EFA helps to condense the information contained in a number of original variables into a smaller set of composite dimensions (factors). CFA is used to provide a confirmatory test of a model derived from the result of EFA (Hair et al., 2010).

[89] The words "factor" and "construct" are statistical terms and interchangeably used in this Chapter.

5.1. Introduction of Survey Data

The purpose of the survey portion of my study was to obtain the perceptions of child welfare caseworkers regarding accountability and performance as well as to learn how they manage the diverse accountability management requirements they face in their work. The survey consisted of 33 multiple choice questions including several background questions. Eight questions measured child welfare workers' perceptions of their work performance (see Table 10), 17 questions tapped perceived accountability pressures (see Table 11), and 8 questions measured the perceived importance of accountability management (see Table 12). All questions were drawn from the content analysis of interview data as well as from existing literature and child welfare public documents (see section 3.3.2). Background questions included respondents' sex, education, age, agency size, work period, job type, job characteristics, agency type, and service region.

In order to reduce measurement error and to enhance accuracy of measurement, I chose to develop multivariate measurements, also known as summated scales, for which several variables are joined in a composite measure to represent a concept. For example, legal accountability was measured by four questions. All measurement scales are treated as interval scales (1 to 7), permitting causal relationships to be investigated.

Table 10: Survey Items to Measure Work Performance

Service Effectiveness

  P1: My work unit has kept children safe.

  P2: My work unit has promoted positive change in families.

  P3: My work unit has met state mandates for job performance.

Efficiency

  P4: My work unit has responded in a timely manner to allegations of abuse.

  P5: My work unit has brought in police support for joint investigation when appropriate.

  P6: My work unit has tried to work with families as soon as possible.

  P7: My work unit has not hesitated to bring matters to court if court action is needed.

Fairness

  P8: My work unit has provided suitable placements for children, such as in foster care, when necessary.

Table 11: Survey Items to Measure Accountability Requirements

Legal accountability

  A1: Uphold federal regulations

  A2: Uphold state policy

  A3: Follow court decisions

  A4: Fulfill documentation requirements

Political accountability

  A5: Respond to the community

  A6: Serve children

  A7: Serve families

Hierarchical accountability

  A8: Explain your actions to supervisors

  A9: Take responsibility for mistakes you made

  A10: Improve the quality of child welfare services

  A11: Follow the direction of my supervisors

Professional accountability

  A12: Learn your role as a caseworker

  A13: Cooperate with co-workers

  A14: Increase professional capacity for child welfare service provision

Ethical accountability

  A15: Maintain ethical standards

  A16: Maintain social values

  A17: Do the right thing at all times

Table 12: Survey Items to Measure Accountability Management

Discretionary strategy
  M1: Using my professional judgment
  M2: Pursuing the best interest of the child
Compliance strategy
  M3: Following state child welfare policy
  M4: Following my agency's guidelines
Communication strategy
  M5: Consulting with my supervisor, regional consultant, or co-workers
  M6: Communicating with official institutions such as the court or legislature
Information strategy
  M7: Learning from decision making tools such as Structured Decision-Making
  M8: Getting information from others outside of my work place

After deleting the 80 cases with uncompleted data for any of the indicators,[90] a total of 155 cases were finally retained, which met the minimum sample size of 150 for the models with seven constructs or less,[91] as Hair et al. (2010, p. 644) recommend. The estimation of my data is within a 95% confidence level and a 7.3% precision level with a 50% of variability ($P = .5$) (see section 3.3.3 for the detail).

General characteristics of the survey respondents are provided in Table 13. Child welfare caseworkers that participated in my study were from five regions of Virginia having a different institutional/environmental background (Figure 7). The western and piedmont regions are usually agriculture based areas, whereas the central, northern, and eastern regions are typically considered urban. In particular, there are many federal agencies in northern region. As I assume the number of caseworkers are proportionate to the regional population, a relatively large number of caseworkers from piedmont region responded; yet there was relatively little participation from the western region.

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[90] These nonresponses are counted by *Qualtrics* software. In most cases, the caseworkers started the survey but did not respond to any questions, which meant they just clicked the link and did nothing.
[91] The final structural model as well as measurement model included seven latent constructs.

Figure 7: VDSS Regional Boundaries
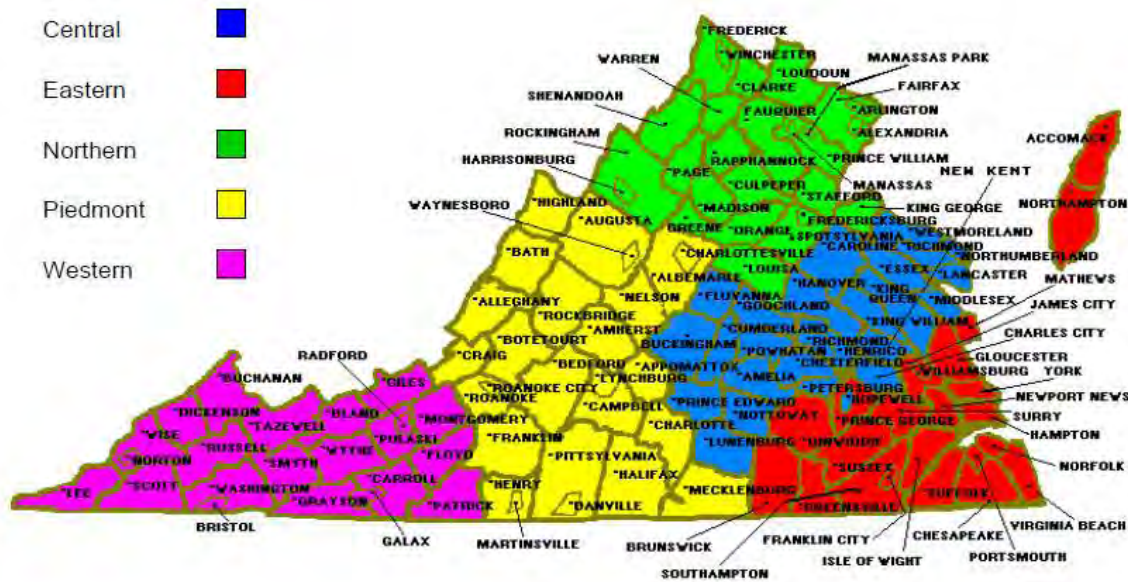
Source: http://www.dss.virginia.gov/division/regional_offices/index.cgi

The majority of the participants are from county public child welfare agencies (81%), institutions having more than 26 employees (81%), and CPS/foster care services (69%). Of the respondents, men were 10 percent and women made up 90 percent. Turning to educational background, most of the respondents have obtained a bachelor's degree or master's degree. Almost half of the respondents (46%) had worked for eleven years or more in the child welfare services and 19 percent had worked 21 years or more.

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Table 13: Characteristics of Survey Participants

Variables	Characteristics	Respondents	%
Service region	Western	8	5
	Piedmont	59	38
	Central	23	15
	Northern	34	22
	Eastern	31	20
Agency type	State public child welfare agency	25	16
	County public child welfare agency	126	81
	Private child/family serving agency	1	1
	Other	3	2
Employees	Less than 26 FTE	30	19
	26 to 80 FTE	56	36
	More than 80 FTE	69	45
Job	Child protective service (CPS)	53	34
	General social service	11	7
	Foster care and adoption	9	6
	Multiple child welfare program	17	11
	Foster care prevention	45	29
	Other	20	13
Job specifications	Intake	5	3
	Investigation	12	8
	Family assessment	30	19
	On-going services	61	40
	Other	47	29
Work period	0-5 years	45	29
	6-10 years	39	25
	11-15 years	28	18
	16-20 years	14	9
	21+ years	29	19
Education	High school diploma or under	0	0
	Associate's (two-year) degree	1	1
	Bachelor's degree	101	65
	Master's degree	50	32
	Ph.D.	0	0
	Other	3	2
Age	18-29 years	35	22
	30-39 years	45	29
	40-49 years	36	23
	50-59 years	24	16
	60 years or older	15	10
Gender	Male	16	10
	Female	139	90
Total	155 (100%)		

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My population and sample was 2,259 child welfare caseworkers[92] and my completed cases were 155. Although survey participants have different backgrounds (particularly in terms of 'service region,' 'age,' 'work period,' and 'job characteristics'), it is not apparent whether there are areas in which the sample is representative of the population, as I already discussed in Chapter 3. This potential unrepresentativeness not only threatens to produce errors in the statistical analysis, but also limits the generalizability of the findings (Groves et al., 2009). A stronger sampling frame and higher response rate would be useful in future studies. The larger the % of the total population, the lower the risk of a non-representative sample (Hair et al., 2010).

Despite these limitations of the study, I examined the representativeness of my data using two methods. First, I compared each mean and standard deviation of 33 items by service region (Figure 8 and Figure 9). Since I did not have the population data, I assumed that the sample standard deviation is an estimate of the unknown population standard deviation.[93] Second, I looked at the characteristics by service region (Table 14). While there are limitations on discovering the characteristics of the population, participants' characteristics of each region are uncovered. These examinations help us to see the extent to which cases from each region vary in terms of geographical and demographical representativeness, and job characteristics.

Generally speaking, characteristics of survey participants by each service region followed the overall characteristics of survey participants, while I observed some variations in my data. Table 14 shows the diverse background from each region. Figures 8 and 9, however, show some variations. Cases from western, central, and eastern regions were somewhat deviated from the entire responses in terms of mean; responses from western and central regions also deviated from

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[92] I have no way of knowing whether this was the actual number that the survey was sent to, as discussed in Chapter 3.
[93] As I explained in Chapter 3, the population and the sample were the same in this study since I surveyed all child welfare caseworkers in Virginia.

the entire responses in terms of standard deviation. These deviations may be attributed to the relatively small number of survey participants from the western (8 cases) and central (23 cases) regions. Further studies pay attention to obtaining enough number of participants from each region.

Figure 8: Comparison of Mean
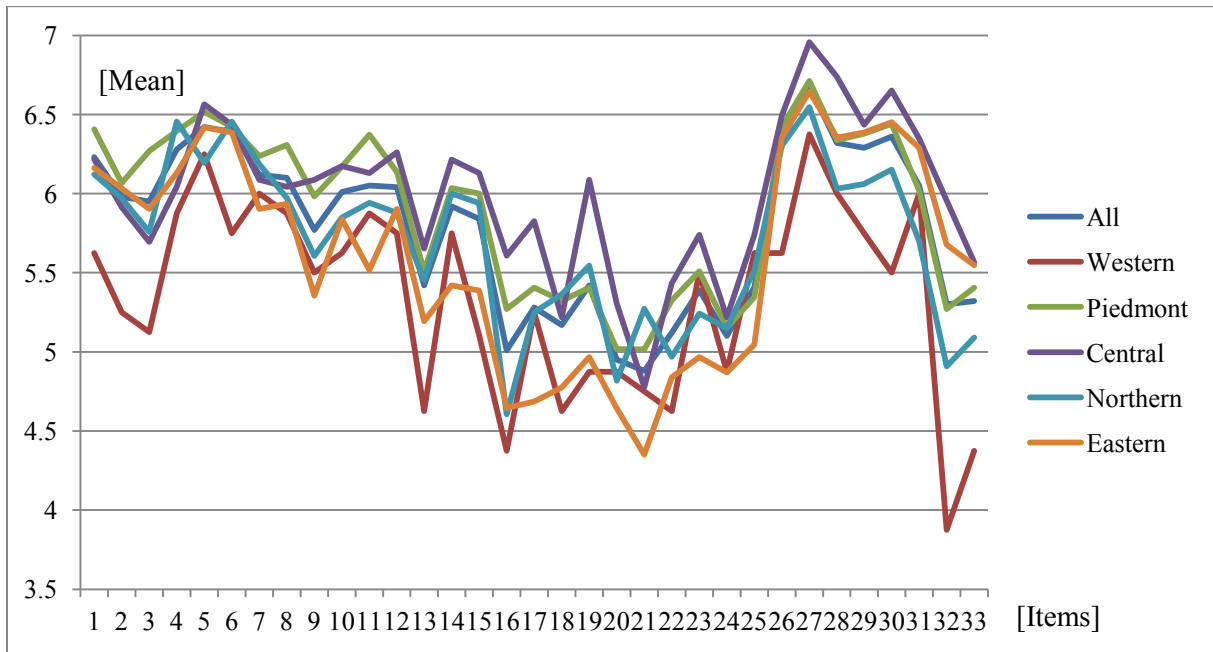
Figure 9: Comparison of Standard Deviation
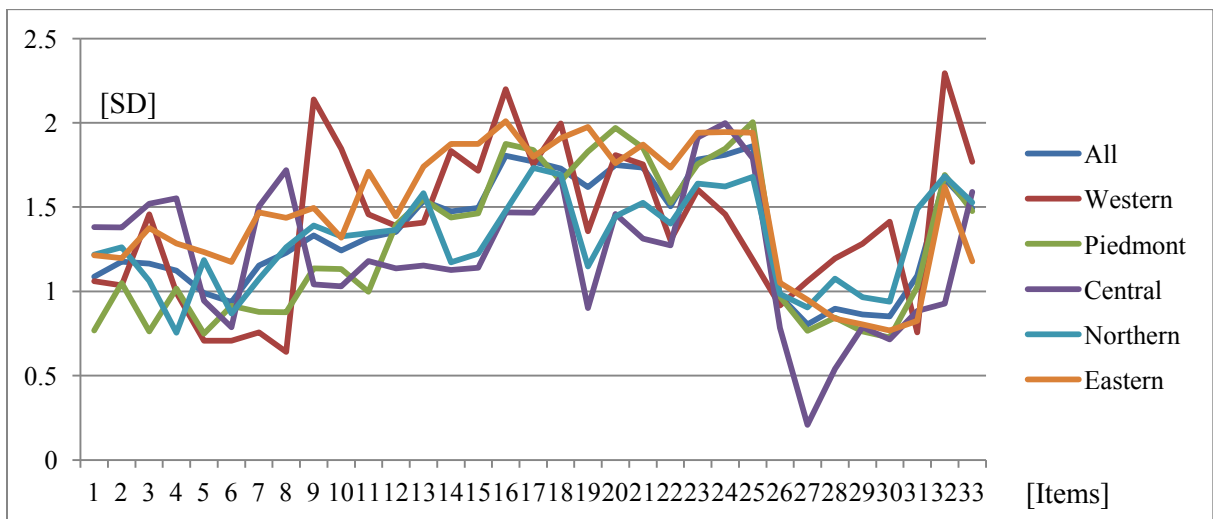
Table 14: Characteristics of Survey Participants by Service Region

Variables	Characteristics	Respondents	%	Western n	Western %	Piedmont n	Piedmont %	Central n	Central %	Northern n	Northern %	Eastern n	Eastern %
Agency type	State public child welfare agency	25	16.1	1	13.5	11	18.6	2	8.7	2	5.9	9	29.0
	County public child welfare agency	126	81.3	7	87.5	46	78.0	20	87.0	31	91.2	22	71.0
	Private child/family serving agency	1	0.6							1	2.9		
	Other	3	1.9			2	3.4	1	4.3				
Employees	Less than 26 FTE	30	19.4	1	12.5	2	3.4	13	56.5	7	20.6	7	22.6
	26 to 80 FTE	56	36.1	3	37.5	25	42.4	5	21.7	6	17.6	17	54.8
	More than 80 FTE	69	44.5	4	50.0	32	54.2	5	21.7	21	61.8	7	22.6
Job	Child protective service (CPS)	53	34.2	4	50.0	24	40.7	8	34.8	10	29.4	7	22.6
	General social service	11	7.1			5	8.5	2	8.7	3	8.8	1	3.2
	Foster care and adoption	9	5.8			1	1.7	2	8.7	1	2.9	5	16.1
	Multiple child welfare program	17	11.0			3	5.1	4	17.4	3	8.8	7	22.6
	Foster care prevention	45	29.0	3	37.5	21	35.6	5	21.7	11	32.4	5	16.1
	Other	20	12.9	1	12.5	5	8.5	2	8.7	6	17.6	6	19.4
Job specifications	Intake	5	3.2			2	3.4	1	4.3	1	2.9	1	3.2
	Investigation	12	7.7			5	8.5			2	5.9	5	16.1
	Family assessment	30	19.4	2	24.5	12	20.3	8	34.8	5	14.7	3	9.7
	On-going services	61	39.4	5	63.0	26	44.1	7	30.4	14	41.2	9	29.0
	Other	47	30.3	1	12.5	14	23.7	7	30.4	12	35.3	13	41.9
Work period	0-5 years	45	29.0	6	75.0	18	30.5	7	30.4	8	20.6	6	19.4
	6-10 years	39	25.2	2	25.0	15	25.4	9	39.1	7	20.6	6	19.4
	11-15 years	28	18.1			15	25.4	4	17.4	6	17.6	3	9.7
	16-20 years	14	9.0			4	6.8	3	13.0	2	5.9	5	16.1
	21+ years	29	18.7			7	11.9			11	32.4	11	35.5
Education	Associate's (two-year) degree	1	0.6									1	3.2
	Bachelor's degree	101	65.2	8	100.0	45	76.3	14	60.9	13	38.2	21	67.7
	Master's degree	50	32.3			14	23.7	9	39.1	18	52.9	9	29.0
	Other	3	1.9							3	8.8		
Age	18-29 years	35	22.6	3	37.5	17	28.8	6	26.1	7	17.6	2	6.5
	30-39 years	45	29.0	1	12.5	19	32.2	9	39.1	10	29.4	6	19.4
	40-49 years	36	23.2	2	25.0	13	22.0	3	13.0	7	20.6	11	35.5
	50-59 years	24	15.5	2	25.0	7	11.9	3	13.0	5	14.7	7	22.6
	60 years or older	15	9.7			3	5.1	2	8.7	5	14.7	5	16.1
Gender	Male	16	10.3	1	12.5	7	11.9			4	11.8	4	12.9
	Female	139	89.7	7	87.5	52	88.1	23	100.0	30	88.2	27	87.1
Total		155	100.0	8	100.0	59	100.0	23	100.0	34	100.0	31	100.0

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5.2. Data Examination

Data containing 155 completed cases were examined regarding missing data, outliers, and the assumptions underlying multivariate techniques such as normality, linearity, and homoscedasticity (Tabachnick & Fidell, 2007). This data examination is an initial step in an effort to reduce the impact of the biases from the data (Hair et al., 2010).

Missing data occur when a respondent fails to answer one or more questions in a survey (Hair et al., 2010). The amount of missing data was very low (see Table 15 below) and they were imputed by the mean substitution method.[94] After this imputation, the number of cases (*N*) of all variables equaled 155 (see Appendix I). Since Likert-scaled questions were provided there were no outliers (see also Table 15 below) and responses are ranged from 1 to 7.

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[94] The missing values were replaced for a variable with the mean value of that variable calculated from all valid responses (Hair et al., 2010, p. 53).

Table 15: Descriptive Statistics

Question	N	Missing	Minimum	Maximum	Median	Mean	Std. Deviation
P_1	155	0	1	7	7.00	6.23	1.086
P_2	155	0	1	7	6.00	5.98	1.176
P_3	154	1	1	7	6.00	5.95	1.165
P_4	154	1	1	7	7.00	6.28	1.123
P_5	153	2	1	7	7.00	6.42	0.991
P_6	155	0	1	7	7.00	6.39	0.936
P_7	154	1	1	7	6.00	6.12	1.154
P_8	153	2	1	7	6.00	6.10	1.229
A_1	155	0	1	7	6.00	5.77	1.332
A_2	154	1	1	7	6.00	6.01	1.242
A_3	154	1	1	7	7.00	6.05	1.318
A_4	155	0	1	7	7.00	6.04	1.353
A_5	155	0	1	7	6.00	5.42	1.537
A_6	154	1	1	7	6.00	5.92	1.475
A_7	154	1	1	7	6.00	5.84	1.496
A_8	155	0	1	7	6.00	5.01	1.804
A_9	153	2	1	7	6.00	5.28	1.771
A_10	155	0	1	7	6.00	5.17	1.728
A_11	155	0	1	7	6.00	5.42	1.619
A_12	153	2	1	7	5.00	4.95	1.750
A_13	152	3	1	7	5.00	4.88	1.734
A_14	154	1	1	7	5.00	5.12	1.505
A_15	155	0	1	7	6.00	5.39	1.782
A_16	155	0	1	7	6.00	5.10	1.810
A_17	153	2	1	7	6.00	5.41	1.862
M_1	154	1	1	7	7.00	6.34	0.973
M_2	155	0	2	7	7.00	6.68	0.804
M_3	155	0	3	7	7.00	6.32	0.897
M_4	154	1	3	7	6.50	6.29	0.863
M_5	155	0	3	7	7.00	6.36	0.852
M_6	153	2	1	7	6.00	6.05	1.093
M_7	155	0	1	7	6.00	5.30	1.668
M_8	155	0	2	7	6.00	5.32	1.494

Next, I assessed the fit of the sample data with the statistical assumptions underlying multivariate technique. The data were examined to ensure univariate normality, which is a very crucial assumption of a quantitative data analysis and closely connected to the issue of multivariate normality, homoscedasticity, and linearity.

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Most individual variables are non-normal in terms of "*z*-value"[95] except a few

accountability (from A_8 to A_17) and management items (M_7 and M_8) (Table 16). From a *z*

distribution, deviation from the values of ±2.58 (.01 significance level) can be understood as

non-normal (Hair et al., 2010). For instance, item P_1's skewness *z*-value and kurtosis *z*-value

are -10.6 and 15.8 respectively, which indicate a distance far from the normal z distribution of

±2.58. All boldface items in Table 16 below are considered having problems of skewness and

kurtosis.

Similar to the pattern of the mean values shown in Table 15 above, respondents reported

slightly positive views overall. The *z*-value in Table 16 below shows that the raw data have a

rightward shift (negative values of skewness) and a peaked (positive kurtosis values) distribution.

In particular, 'performance' items show a positive view as expected. Thus, these non-normal

variables are transformed by taking the squared (i.e., A_5^2) and cubed (i.e., P_2^3) terms (Hair et

al., 2010, p. 78). Some variables are multiplied to the fourth power (e.g., Performance item 1).

The new descriptive statistics after data transformation is available in Appendix I.

As a result, the normality has obviously improved.[96] For example, after accountability

item 1 (A_1) is cubed, the *z*-value is changed to be close to the normal distribution. The

skewness *z*-value is changed from -6.064 to -1.374; the kurtosis *z*-value is changed from 3.308 to

3.295. The histogram confirms this evidence in a visual manner. Figure 11 (A1_Cubed's normal

distribution) compared to Figure 10 (A_1's normal distribution) graphically shows the shape of

improved normal distribution.

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[95] The *z*-value is derived by dividing the statistics by the appropriate standard errors of skewness and kurtosis (0.195 and 0.387 in this study). The statistic value (*z*) for the skewness value is calculated as: $z = \frac{skewness}{\sqrt{6/N}}$, the statistic value (*z*) for the kurtosis value can be calculated as: $z = \frac{kurtosis}{\sqrt{24/N}}$ (Hair et al., 2010, p.72-73).

[96] However, some items such as P_5 and M_2 still remained non-normal according to indices of *z*-value (Table 16). Too much transformation may distort the information of raw data and these two items were normalized compared to the previous ones, so I stopped further remedies.

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Table 16: Univariate Normality and Remedies

| | Descriptive Statistics | | | | | | | Remedies for Nonnormality | | | |
| | Skewness | | | Kurtosis | | | | Skewness | | Kurtosis | |
	Statistic	z-value	S.E.	Statistic	z-value	S.E.		Statistic	z-value	Statistic	z-value
P_1	-2.077	**-10.660**	0.195	6.155	**15.888**	0.387	P1_Fourth	-0.574	-2.944	-1.147	-2.964
P_2	-1.249	**-6.407**	0.195	1.802	**4.651**	0.387	P2_Cubed	-0.380	-1.949	-1.248	-3.225
P_3	-1.764	**-9.051**	0.195	4.422	**11.416**	0.387	P3_Fourth	-0.066	-0.338	-1.239	-3.202
P_4	-2.513	**-12.897**	0.195	8.309	**21.449**	0.387	P4_Fourth	-0.719	-3.687	-0.820	-2.119
P_5	-2.349	**-12.052**	0.195	7.028	**18.142**	0.387	P5_Fourth	-1.060	**-5.436**	-0.242	-0.625
P_6	-2.403	**-12.332**	0.195	8.941	**23.082**	0.387	P6_Fourth	-0.779	-3.995	-0.831	-2.147
P_7	-1.838	**-9.434**	0.195	4.445	**11.473**	0.387	P7_Fourth	-0.422	-2.164	-1.228	-3.173
P_8	-1.947	**-9.993**	0.195	4.700	**12.133**	0.387	P8_Fourth	-0.472	-2.421	-1.170	-3.023
A_1	-1.182	**-6.064**	0.195	1.281	**3.308**	0.387	A1_Cubed	-0.268	-1.374	-1.275	-3.295
A_2	-1.398	**-7.175**	0.195	1.819	**4.697**	0.387	A2_Cubed	-0.580	-2.974	-1.014	-2.620
A_3	-1.631	**-8.368**	0.195	2.321	**5.993**	0.387	A3_Cubed	-0.765	-3.923	-0.713	-1.842
A_4	-1.634	**-8.385**	0.195	2.391	**6.173**	0.387	A4_Cubed	-0.769	-3.944	-0.790	-2.041
A_5	-0.928	**-4.762**	0.195	0.278	**0.716**	0.387	A5_Squared	-0.345	-1.769	-1.035	-2.674
A_6	-1.651	**-8.470**	0.195	2.312	**5.967**	0.387	A6_Cubed	-0.697	-3.574	-0.825	-2.132
A_7	-1.539	**-7.900**	0.195	1.933	**4.991**	0.387	A7_Cubed	-0.578	-2.964	-0.986	-2.548
A_8	-0.770	-3.951	0.195	-0.348	-0.898	0.387					
A_9	-1.031	-5.293	0.195	0.217	0.561	0.387					
A_10	-0.883	-4.530	0.195	0.014	0.035	0.387					
A_11	-1.067	-5.474	0.195	0.468	1.208	0.387					
A_12	-0.685	-3.513	0.195	-0.376	-0.972	0.387					
A_13	-0.562	-2.884	0.195	-0.543	-1.403	0.387					
A_14	-0.728	-3.734	0.195	0.071	0.184	0.387					
A_15	-1.048	-5.377	0.195	0.061	0.157	0.387					
A_16	-0.795	-4.080	0.195	-0.369	-0.953	0.387					
A_17	-1.186	-6.085	0.195	0.336	0.867	0.387					
M_1	-2.257	**-11.583**	0.195	7.550	**19.489**	0.387	M1_Fourth	-0.710	-3.641	-0.856	-2.212
M_2	-3.847	**-19.739**	0.195	17.407	**44.936**	0.387	M2_Fourth	-1.994	**-10.226**	3.282	**8.481**
M_3	-1.341	**-6.882**	0.195	1.561	**4.030**	0.387	M3_Squared	0.984	-5.044	0.059	0.151
M_4	-1.228	**-6.300**	0.195	1.267	**3.271**	0.387	M4_Squared	0.878	-4.504	0.015	-0.040
M_5	-1.473	**-7.559**	0.195	2.041	**5.269**	0.387	M5_Cubed	-0.833	-4.272	-0.344	-0.889
M_6	-1.400	**-7.184**	0.195	2.632	**6.795**	0.387	M6_Cubed	-0.442	-2.267	-0.992	-2.563
M_7	-0.975	-5.002	0.195	0.269	0.695	0.387					
M_8	-0.663	-3.401	0.195	-0.438	-1.130	0.387					

Note: "Fourth" means "to the fourth power." "S.E." is standard error.

Figure 10: Histogram and P-P plot of "A_1"
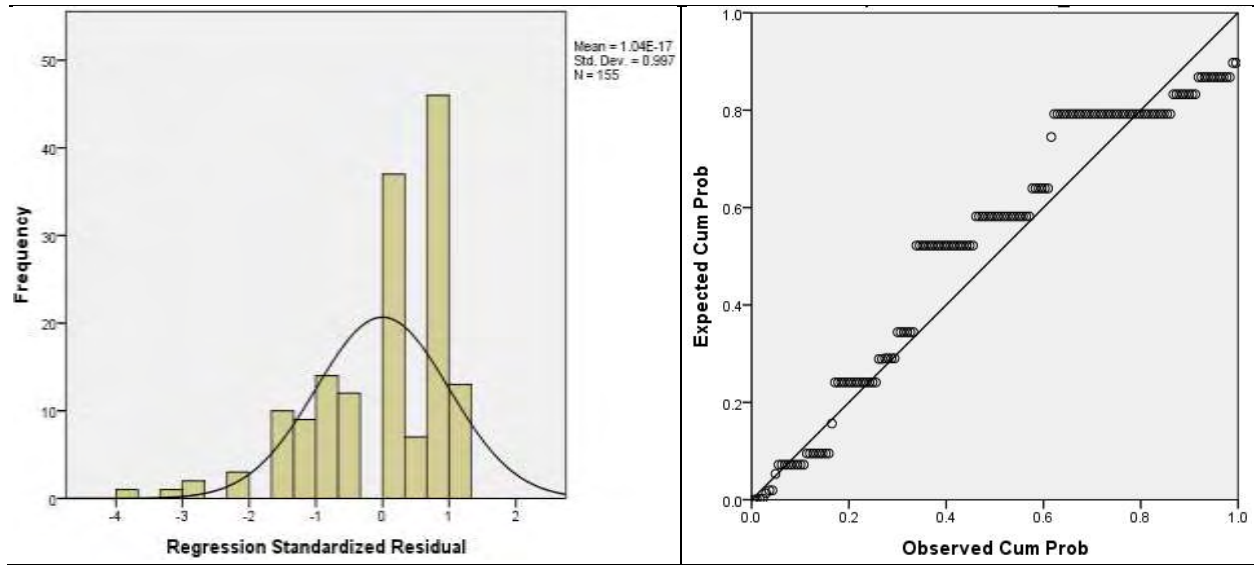
Figure 11: Histogram and P-P plot of "A1_Cubed"
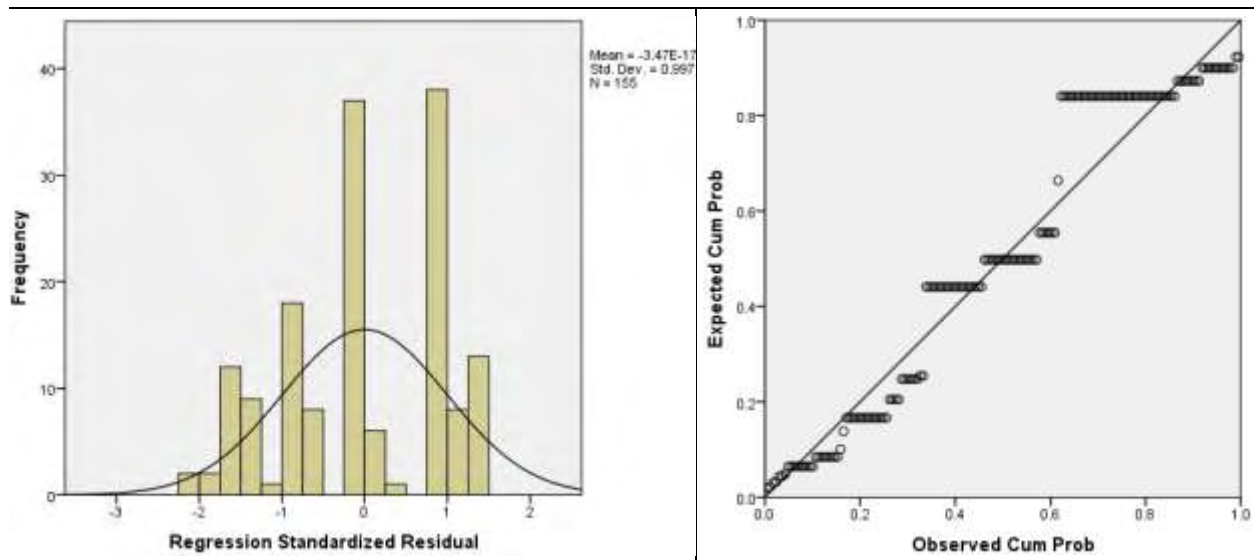
After data transformation, the Kolmogorov-Smirnov test—one of the statistical tests for normality—showed that most variables are statistically not significant, which implies that the distribution became relatively normal.

Subsequently, tests for homoscedasticity (assessed by the Levene Test) and linearity (by examining residuals) met the assumptions. Homoscedasticity is an assumption that dependent

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variables exhibit equal levels of variance across the range of predictor variables, which is desirable (Hair et al., 2010, p.74). If this variance is unequal across values of the independent variables, the relationship is defined to be heteroscedastic (Hair et al., 2010, p. 74). In the Levene test within SPSS software, most Levene statistics were not statistically significant at the .05 level, which implies the variances of dependent variables are equal across any number of groups. Only one item "P5_Fourth (My work unit has brought in police support for joint investigation when appropriate)" had minimal violations of this assumption, with no corrective action needed. Linearity refers to the linear association between variables. I ran a regression analysis with transformed data to observe residual plots. The plots did not indicate any nonlinear relationships between the variables.

Throughout the data examination and transformation, my survey data was adjusted and aligned for the statistical analysis. Factor analysis applied to data, was approximately univariate normal (Floyd & Widaman, 1995). Yet, multivariate normality still indicated non-normality (see Appendix J), which is not uncommon in social science research (Tabachnick & Fidell, 2007). Despite the fact that the multivariate normality assumption was not met, meeting the assumptions of univariate normality, linearity, and homoscedasticity confirm that the data were ready for a multivariate analysis.[97] Nevertheless, I made several efforts to improve matters. First, I used a raw matrix for input data instead of a covariance matrix for the analysis of CFA and SEM (Hox & Bechger, 1998) even though a covariance matrix is the input mostly used in SEM.[98] Second, factoring extraction method (principal factor methods, e.g., "principal axis factors (PAF)") is

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[97] Hair et al. (2010, p.71) also admit that "In most cases assessing and achieving univariate normality for all variables is sufficient, and we will address multivariate normality only when it is especially critical."
[98] "Raw matrix" refers to the raw data in which values from the survey respondents are intact. "Covariance matrix" means a data matrix which contains covariance values between variables.

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used for first EFA instead of component extraction.[99] In general, PAF gives better results when the data are non-normal (Fabrigar, Wegener, MacCallum, & Strahan, 1999). Finally, the Bollen-Stine bootstrap is used to adjust distributional misspecification of the model (for example, adjusting for lack of multivariate normality) when conducting CFA and SEM.[100] Having completed these remedies, the maximum likelihood (ML) estimation—a procedure that iteratively improves parameter estimates to minimize a specified fit function (Hair et al., 2010)—was used in the structural model.[101]

5.3. Factor Analysis

A basic assumption of factor analysis is that some underlying structure does exist in the set of selected variables (Hair et al., 2010). Correlated variables can be grouped together using factor analysis.

5.3.1. EFA: Extraction of Types

There are multiple ways to extract factors. Factor extraction attempts to remove variance common to sets of variables from the original matrix of association. While "Principal Component Analysis (PCA)" is intended to simply summarize many variables into fewer components (i.e., data reduction), and the latent constructs (i.e., factors) are not the focus of the analysis, "Principal Axis Factoring (PAF)"—common or principal factor analysis—explicitly

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[99] More details about the difference between factoring method and component method are explained in the following section 5.3.1.

[100] Bootstrapping method is used when sample size is small or when there are other reasons for suspecting that SEM's assumption of multivariate normality of the indicators is violated. If the bootstrapped standard error estimates are similar with the maximum likelihood (ML) estimates and bias low, then the ML estimates can be interpreted without fear that departures from multivariate normality or due to small samples have biased the calculation of parameters (Garson, 2012).

[101] In general, asymptotically distribution free (ADF) is usually adopted for the data which is not normal (Hox & Bechger, 1998). However, the sample was not big enough to conduct ADF.

focuses on the common variance among the items and, therefore, focuses on the latent factor.[102] This study adopted PAF at the first EFA and PCA at the second EFA for a factor extraction method. An oblique rotation when using PAF and varimax rotation when using PCA have been applied.

During the first EFA, I used common factoring, to see whether the three major concepts (accountability, performance, accountability management) in this study are well differentiated from each other. In common factor analysis, the factors are estimated to explain the covariances among the observed variables and the factors are viewed as the causes of the observed variables (Floyd & Widaman, 1995). The second EFA was designed to extract factors (constructs or dimensions) from each concept. Principal components analysis (or, simply, component analysis) is suitable in that the components are estimated to represent the variances of the observed variables in as economical a fashion as possible (i.e., in as small a number of dimensions as possible) and no latent variables underlying the observed variables need to be invoked (Floyd & Widaman, 1995).

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[102] B. Thompson and Daniel (1996) note that "when a correlation matrix is analyzed, principal components analysis uses ones on the diagonal whereas common factor analysis uses estimates of reliability, usually estimated through an iterative process" (p. 201).

Figure 12: EFA Procedure
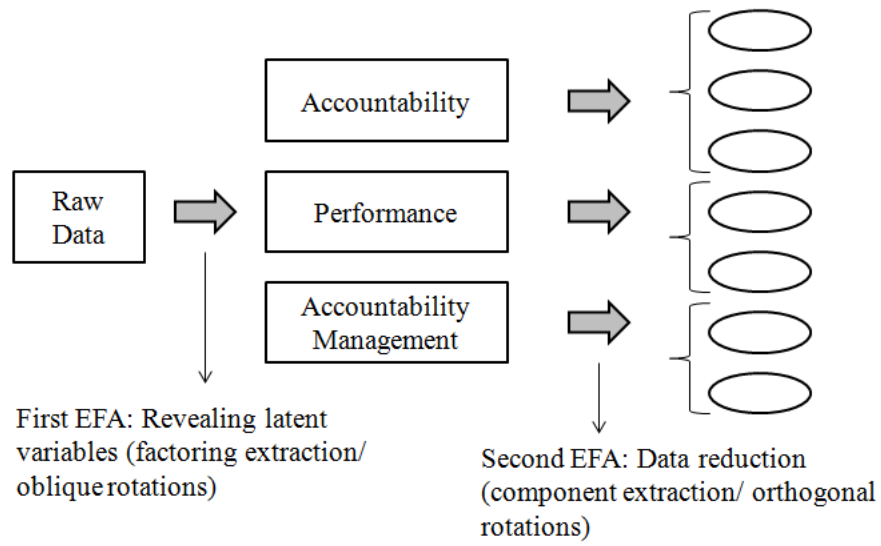
Prior to running the EFA, I checked the appropriateness of applying factor analysis to the data. A substantial number of correlations were greater than .30 and anti-image correlations were not large (see Appendix K). An application of Bartlett's Test of Sphericity[103] ($P < .001$) indicates that sufficient correlations exist among the variables in order to proceed. Lastly, Measure of Sampling Adequacy (MSA)[104] shows .875 (above threshold .50), which can be interpreted as a "meritorious" level (Hair et al., 2010, p.104). Taken together, minimum levels of correlations are observed, which implies that some underlying structure exists and, thereby factor analysis is appropriate.[105]

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[103] "A statistical test for the presence of correlations among the variables" (Hair et al., 2010, p.104)
[104] This index tests "the degree of intercorrelations among the variables and the appropriateness of factor analysis" (Hair et al., 2010, p.104).
[105] Since factor analysis will derive factors, a base level of statistical correlation within the set of variables is recommended (Hair et al., 2010, p.132).

Specified Factors

As a result of first EFA, Table 17 was produced. I sorted through all the factor loadings[106] to identify those most indicative of the underlying structure. Accountability requirements (A1_Cubed ~ A_17), work performance (P1_Fourth ~ P7_Fourth), and accountability management (M1_Fourth ~ M_8) are well constructed and differentiated from each other, which means that three concepts are well measured enough to be separated. In Table 17, the structure matrix (left column) has loadings containing both the unique variance between variables and factors and the correlation among factors. The pattern matrix (right column) shows loadings that represent the unique contribution of each variable to the factor.

When it comes to factor loadings, A_15, A_16 and A_17 were the most significant items for the factor solution of accountability. In other words, the questionnaires of ethical accountability requirements such as A_15 (Maintain ethical standards), A_16 (Maintain social values), and A_17 (Do the right thing at all times) are significantly accounted for by the factor of accountability requirement in child welfare services. Likewise, the performance questionnaires such as P1[107] (My work unit has kept children safe), P4 (My work unit has responded in a timely manner to allegations of abuse), and P8 (My work unit has provided suitable placements for children, such as in foster care, when necessary) are significantly accounted for by the factor of perceived work performance of child welfare caseworkers. M3 (Following state child welfare policy), M4 (Following my agency's guidelines), and M6 (Communicating with official institutions such as the court or legislature) showed high loadings to the factor of accountability management.

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[106] "Correlation between the original variables and the factors" (Hair et al., 2010, p.92)
[107] Hereafter, transformed items are mentioned in a shortened form. For example, I indicate "P1" as "P1_Fourth."

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Table 17: First EFA (revealing latent)

| | Structure Matrix | | | | Pattern Matrix | | |
| | | Factor | | | | Factor | |
	1	2	3		1	2	3
A_15	**0.883**	0.238	0.318	A_15	**0.876**	-0.051	0.073
A6_Cubed	**0.855**	0.367	0.272	A_11	**0.846**	-0.135	-0.044
A7_Cubed	**0.849**	0.381	0.310	A_17	**0.838**	-0.073	-0.005
A_16	**0.839**	0.237	0.320	A_16	**0.825**	-0.041	0.086
A_17	**0.815**	0.173	0.220	A6_Cubed	**0.825**	0.135	-0.031
A_11	**0.793**	0.098	0.159	A_9	**0.805**	-0.067	-0.057
A_9	**0.768**	0.148	0.160	A7_Cubed	**0.805**	0.138	0.011
A3_Cubed	**0.763**	0.331	0.248	A_12	**0.744**	-0.062	0.109
A_12	**0.758**	0.201	0.309	A3_Cubed	**0.734**	0.124	-0.023
A5_Squared	**0.758**	0.353	0.262	A_13	**0.726**	-0.062	0.069
A_10	**0.750**	0.304	0.253	A_10	**0.724**	0.091	-0.002
A_13	**0.728**	0.180	0.264	A5_Squared	**0.719**	0.145	-0.013
A_14	**0.703**	0.266	0.374	A_8	**0.703**	-0.165	-0.019
A2_Cubed	**0.672**	0.328	0.282	A_14	**0.648**	0.004	0.176
A_8	**0.648**	0.035	0.129	A2_Cubed	**0.622**	0.127	0.043
A1_Cubed	**0.511**	0.250	0.223	A4_Cubed	**0.511**	0.107	-0.120
A4_Cubed	**0.507**	0.210	0.078	A1_Cubed	**0.470**	0.094	0.043
P1_Fourth	0.261	**0.746**	0.239	P1_Fourth	0.061	**0.761**	-0.081
P8_Fourth	0.172	**0.710**	0.284	P8_Fourth	-0.044	**0.718**	0.013
P4_Fourth	0.239	**0.709**	0.282	P4_Fourth	0.034	**0.702**	-0.007
P6_Fourth	0.195	**0.674**	0.458	P2_Cubed	0.090	**0.649**	-0.089
P2_Cubed	0.255	**0.640**	0.196	P6_Fourth	-0.053	**0.595**	0.238
P7_Fourth	0.212	**0.633**	0.363	P7_Fourth	0.000	**0.580**	0.133
P5_Fourth	0.284	**0.609**	0.439	P3_Fourth	0.006	**0.572**	0.018
P3_Fourth	0.181	**0.581**	0.247	P5_Fourth	0.069	**0.502**	0.219
M3_Squared	0.253	0.326	**0.768**	M3_Squared	0.018	0.021	**0.754**
M4_Squared	0.247	0.340	**0.717**	M6_Cubed	-0.017	-0.096	**0.754**
M6_Cubed	0.183	0.198	**0.711**	M4_Squared	0.021	0.061	**0.687**
M5_Cubed	0.226	0.475	**0.677**	M_7	-0.068	0.070	**0.622**
M_7	0.141	0.297	**0.629**	M5_Cubed	-0.025	0.250	**0.585**
M_8	0.254	0.201	**0.587**	M_8	0.095	-0.057	**0.581**
M1_Fourth	0.272	0.231	**0.539**	M1_Fourth	0.121	-0.005	**0.505**
M2_Fourth	0.154	0.228	**0.497**	M2_Fourth	-0.003	0.037	**0.483**

Extraction Method: Principal Axis Factoring.
Rotation Method: Oblimin with Kaiser Normalization.

A second EFA was performed to identify dimensions of each concept. I ran three EFAs with each accountability, performance, and accountability management variables. Similar to the case of overall appropriateness of factor analysis, three EFAs reported indices appropriate for factor analysis. For example, EFAs for accountability, performance, and accountability management contained high levels of Measure of Sampling Adequacy (MSA): .925, .840, and .780 respectively. In addition, Bartlett's Test of Sphericity was significant for all EFAs. All items including eigenvalue[108] greater than 1.0 are included.

Table 18: Second EFA (data reduction)

	Component				Component	
	1	2	3		1	2
A_16	**0.813**	0.277	0.224	P5_Fourth	**0.840**	0.113
A_17	**0.807**	0.249	0.217	P7_Fourth	**0.825**	0.176
A_15	**0.806**	0.308	0.288	P6_Fourth	**0.677**	0.372
A_13	**0.778**	0.008	0.370	P4_Fourth	**0.587**	0.504
A_12	**0.720**	0.088	0.449	P8_Fourth	**0.539**	0.532
A6_Cubed	**0.719**	0.559	0.099	P2_Cubed	0.087	**0.871**
A_10	**0.717**	0.255	0.239	P1_Fourth	0.248	**0.829**
A7_Cubed	**0.712**	0.556	0.104	P3_Fourth	0.315	**0.599**
A_14	**0.672**	0.134	0.363		1	2
A5_Squared	**0.587**	0.520	0.178	M4_Squared	**0.843**	0.095
A2_Cubed	0.233	**0.864**	0.218	M3_Squared	**0.835**	0.183
A1_Cubed	0.092	**0.843**	0.125	M5_Cubed	**0.758**	0.141
A3_Cubed	0.469	**0.717**	0.167	M_7	**0.661**	0.212
A4_Cubed	0.107	**0.600**	0.362	M6_Cubed	**0.643**	0.349
A_8	0.241	0.282	**0.806**	M_8	**0.587**	0.259
A_9	0.475	0.214	**0.734**	M1_Fourth	0.225	**0.857**
A_11	0.452	0.322	**0.696**	M2_Fourth	0.181	**0.841**

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

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[108] Eigenvalue is "column sum of squared loadings for a factor," which "represents the amount of variance accounted for by a factor" (Hair et al., 2010, p.92).

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Table 18 above contains information about grouped items and the factor loadings of each EFA. Three groups are derived from accountability, two groups from performance, and two groups from accountability management.[109] Each column of numbers (factor loadings) indicates a high loading (high loading is defined as greater than .40) (Hair et al., 2010, p.136). Factor 1 of accountability represents *legal accountability* (A1: Uphold federal regulations, A2: Uphold state policy, A3: Follow court decisions, and A4: Fulfill documentation requirements). Factor 2 represents *hierarchical accountability* (A_8: Explain your actions to supervisors, A_9: Take responsibility for mistakes you made, and A_11: Follow the direction of my supervisors). Factor 3 is a mix of *political, professional, and ethical accountability* (e.g., A5: Respond to the community, A_12: Learn your role as a caseworker, and A_15: Maintain ethical standards). This mix of accountability questionnaires can be attributable to either poor measurement or survey participants' inaccurate responses. Whichever it is, the survey tool should be reexamined and refined for the future study.

Two constructs are identified for performance. Factor 1 of performance deals with *effectiveness* (P1: My work unit has kept children safe, P2: My work unit has promoted positive change in families, and P3: My work unit has met state mandates for job performance). Factor 2 represents a mix of *efficiency and fairness* questionnaires (P4 ~P8). EFA for accountability management produced two factor solutions: *discretionary strategy* (M1: Using my professional judgment and M2: Pursuing the best interest of the child) and a mix of *other strategies* (M3 ~ M_8). Similar to case of factor solutions of accountability, some qualitatively differentiated factors (categories in Chapter 4)—efficiency and fairness; and compliance, communication, and information strategies—are identified as one construct after applying statistical techniques.

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[109] Each group represents each factor later.

Respecification

I rearranged the variables according to loadings. Factor loadings less than .40 are omitted. Items with factor loadings close to .40 also were dropped because they were somewhat evenly loaded for more than two factors (e.g., A_12, A6_Cubed, A5_Squared, A7_Cubed, A3_Cubed, A_14, P4_Fourth, P8_Fourth, and M6_Cubed). In addition, I constrained no more than four items for each construct since too many items included in one factor diminish the core meaning of grouped items (Hair et al., 2010). For instance, a hierarchical questionnaire of A_10 (Improve the quality of child welfare services) was excluded since factor 1 of accountability consists mainly of ethical and professional accountability questionnaires. Similarly, item M_8 (Getting information from others outside of my work place) was omitted because of its relatively small factor loading and its conceptual distance from the core concept (i.e., compliance strategy of M3 and M4). Respecified factors and factor loadings are reported in Table 19, which will be used for developing a measurement model.

Table 19: Respecified Factor Matrix

Accountability	1	2	3	Management	1	2	Performance	1	2
A_16	0.813			M4_Squared	0.843		P5_Fourth	0.840	
A_17	0.807			M3_Squared	0.845		P7_Fourth	0.825	
A_15	0.806			M5_Cubed	0.768		P6_Fourth	0.677	
A_13	0.778			M_7	0.651		P2_Cubed		0.871
A2_Cubed		0.864		M1_Fourth		0.857	P1_Fourth		0.829
A1_Cubed		0.843		M2_Fourth		0.841	P3_Fourth		0.599
A4_Cubed		0.600							
A_8			0.806						
A_9			0.734						
A_11			0.696						

Respecified EFA for accountability yielded three factor solutions: *legal accountability* (items A1, A2, and A4—Cronbach's α= .811), *hierarchical accountability* (items A_8, A_9, and A_11—Cronbach's α= .887), and *ethical (professional) accountability* (items A_13, A_15, A_16, and A_17—Cronbach's α= .924). EFA for performance contained two constructs: *effectiveness* (items P1, P2, and P3—Cronbach's α= .543) and *efficiency* (items P5, P6, and P7—Cronbach's α= .774). EFA for accountability management produced two factor solutions: *discretionary strategy* (items M1 and M2—Cronbach's α= .707) and *compliance strategy* (items M3, M4, M5, and M_7—Cronbach's α= .308).[110] In case of compliance strategy, M3 and M4 strongly contribute to the factor while M5 and M_7 contribute weakly. Conceptually, this compliance strategy factor should be refined further since it contains other contents (communication and information strategies).

Cronbach's alpha is a commonly used measure testing the extent to which multiple indicators for a latent variable belong together (reliability). It varies from 0 to 1.0. A common rule of thumb is that the indicators should have a Cronbach's alpha of .7 to judge the set reliable. The reliability of the factor solution of M3, M4, M5, and M_7 was too low, which implies that the factor is not reliable. Thus, I excluded M5 (Consulting with my supervisor, regional consultant, or co-workers) and the reliability improved (α= .738). The reliability of the factor (construct) including variables P1, P2, and P3 was also relatively low. It is contributable to the transformation of the data because the reliability of raw data was pretty high (α= .766). As we can see later at the construct validity, this construct shows a good index of composite reliability

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[110] The process of labeling factors is based primarily on the subjective opinion of the researcher (Hair et al., 2010, p.139). To be justifiable, all *significant factor loadings (i.e., the items that significantly associated with the factor)* are used in the interpretation process (p.138). In addition, I tried to be logical and consistent with the literature and the result of interview data analysis. This naming is subject to change through a process of CFA and SEM.

(CR = .768) (see Table 20 below). Thus, the low value of alpha from the group of P1, P2, and P3 is not a concern.

In sum, three factors in accountability, two factors in performance and two factors in accountability management are finally derived. Compared to the categories identified in the qualitative study of Chapter 4, political accountability requirement, fairness of performance, communication strategy, and information strategy were not specified as statistically significant factors. As I acknowledged above, this could be an issue of survey instrument or measurement. The rest of factors extracted are conceptually and statistically well-built. In particular, I planned to examine effectiveness, efficiency, and fairness of performance as is the literature, but the construct of fairness faded away through the data reduction process. A plausible explanation might be the weak measurement (only one specific question for fairness) and a relatively less well-developed concept of fairness in practice than concepts of effectiveness or efficiency. Further study for this concept is, therefore, needed.

5.3.2. CFA: Measurement Model

In the previous section, I explored what features came together within accountability, performance, and accountability management and presented candidate items with factors (constructs) for measurement model. CFA tests and respecifies the factor model in order to build a stronger measurement model. The construct and discriminant validity tests are examined. Also, this section provides bivariate statistics to examine whether the relationships among the factors make sense for further analysis by looking at the magnitude of the correlation coefficients.

Constructing a Measurement Model

Building on the result of EFA extraction (Table 19 above) with a modification (M5 omitted), I established a measurement model. This initial model was revised once. I checked residuals[111] to see whether they were greater than ±4.0. The value of residuals, for example, above 4.0 represents a potentially unacceptable degree of error (Hair et al., 2010). In addition, modification indices (MI)[112] are reviewed for the potential cross-loading issues. An item whose value is greater than 4.0 should possibly be removed. Item A_13 (professional accountability: cooperate with co-workers) was identified to be removed.

After removing item A_13, the final measurement model in Figure 13 suggests a good model fit[113] by the significant reduction of chi-square[114] (from initial model $\chi^2 = 256.543$, $df = 168$, $p < .001$, $\chi^2/df = 1.527$ to $\chi^2 = 211.258$, $df = 149$, $p < .001$, $\chi^2/df = 1.418$) and by an increase in comparative fit index (CFI)[115] from .954 to .966. The root mean square error of approximation (RMSEA)[116] decreased from .059 to .052. While *p*-value for the χ^2 test was statistically significant indicating problems with the fit, the Bollen-Stine bootstrap *p*-value was above .05 ($p = .169$), which implied that the model is accepted (Garson, 2012).

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[111] "Individual differences between observed covariance terms and the estimated covariance terms" (Hair et al., 2010, p.670)

[112] "Amount the overall model χ^2 value would be reduced by freeing any single particular path that is not currently estimated" (Hair et al., 2010, p.669)

[113] Good model fit (goodness-of-fit: GOF) means that a specified model well reproduces the covariance matrix among the indicator variables (Hair et al., 2010). Any model pursues better fit.

[114] χ^2 is the most fundamental absolute fit index to quantify the differences between the covariance matrices (Hair et al., 2010, p.648). The lower, the better.

[115] CFI is an incremental fit index with higher values indicating better fit (Hair et al., 2010, p.650).

[116] RMSEA is used to correct for both model complexity and sample size by including each in its computation. Lower RMSEA values indicate better fit (Hair et al., 2010, p.649).

Figure 13: Measurement Model

$\chi^2 = 211.258$, df = 149, p < .001, χ^2/df = 1.418, CFI=.966, RMSEA=.052

1) Accountability Requirements: legal, hierarchical, and ethical accountability
2) Accountability Management: discretionary and compliance strategy
3) Work Performance: effectiveness and efficiency

Construct Validity

The Goodness of Fit (GOF) indices showed good level of model validity (χ^2 = 211.258, df = 149, p < .001, χ^2/df = 1.418, CFI=.966, RMSEA=.052). Additionally, a model validity test was performed and I evaluated the *construct validity* of the specified measurement model (Hair et al., 2010, p.686-687). Tests of construct validity are intended to determine if a set of measured items reflects the latent construct. If constructs are valid, one can expect relatively high correlations between measures of the same construct using different methods and low correlations between measures of constructs that are expected to differ.

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Table 20 reports that indicators demonstrated *convergent validity*, as all *t* values for the loadings were statistically significant, and the standardized factor loadings (λ) were nontrivial (most are exceeding 0.60). When the *t* values—Critical Ratio—exceed 1.96 for a regression weight, that path is significant at the .05 level (that is, its estimated path parameter is significant), which confirms each convergent validity of the constructs. Reliability coefficients (Cronbach's alpha) are also presented.[117] All Cronbach's alphas except the "effectiveness" factor are greater than Nunnally's (1978) suggested level of .7. Convergent validity is also assessed by calculating construct reliability (CR, or composite reliability) and the average variance extracted (AVE) (Anderson & Gerbing, 1988).[118] All estimates of the composite reliability (CR) exceed .7 and all average variance extracted (AVE) scores are above .5, indicating good convergent validity.

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[117] Cronbach's alpha assesses how well a set of items measures a single, unidimensional latent construct.

[118] The composite reliability (CR) estimates the extent to which a set of latent construct indicators share in their measurement of a construct. AVE indicates the amount of variance captured by the construct in relation to the variance to due to measurement error. $CR = \frac{(sum\ of\ standardized\ loading)^2}{(sum\ of\ standardized\ loading)^2 + sum\ of\ indicator\ measurement\ error}$ $AVE = \frac{sum\ of\ squared\ standardized\ loading}{sum\ of\ squared\ standardized\ loading + sum\ of\ indicator\ measurement\ error}$ (Indicator measurement error = 1 – the square of each standardized loading)

Table 20: Properties of the Measurement Model

Construct & Indicators	λ	*t*	R²	α	CR	AVE
Legal Accountability				0.811	0.847	0.661
A4_Cubed	0.56	7.50	0.31			
A2_Cubed	1.03	16.81	1.06			
A1_Cubed	0.78	11.21	0.61			
Hierarchical Accountability				0.887	0.889	0.727
A_11	0.90	13.94	0.82			
A_9	0.86	12.81	0.74			
A_8	0.79	11.49	0.63			
Ethical Accountability				0.949	0.949	0.863
A_16	0.93	15.07	0.86			
A_15	0.97	16.47	0.95			
A_17	0.88	13.87	0.78			
Discretionary Strategy				0.707	0.721	0.564
M1_Fourth	0.73	7.81	0.53			
M2_Fourth	0.77	8.18	0.60			
Compliance Strategy				0.738	0.835	0.563
M3_Squared	0.98	14.87	0.95			
M4_Squared	0.86	12.47	0.74			
M_7	0.49	6.33	0.24			
Effectiveness				0.543	0.768	0.532
P1_Fourth	0.85	11.01	0.71			
P2_Cubed	0.77	10.00	0.59			
P3_Fourth	0.54	6.48	0.29			
Efficiency				0.774	0.779	0.542
P5_Fourth	0.79	10.20	0.62			
P6_Fourth	0.68	8.45	0.46			
P7_Fourth	0.74	9.51	0.54			

Note: Lambdas (λ) are standardized loadings; The t values (C.R.) are indicator reliability; R^2 is Squared Multiple Correlations; Cronbach's Alpha (α); CR is composite (construct) reliability; and AVEs are variance extracted estimates.

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Discriminant Validity

Each construct met the criterion in support of *discriminant validity* as all variance extracted (AVE) estimates in the above table were larger than the corresponding "squared interconstruct correlation estimates" (SIC).[119] This means that the indicators have more in common with the construct they are associated with than they do with other constructs. Therefore, the CFA model demonstrates discriminant validity.

Bivariate Statistics

Table 21 shows the correlation matrix of factors. The 20 bivariate correlations (with one exception) were statistically significant. Since the other correlations are consistent, this one exception is not a major concern. The magnitude of the correlation coefficients for most factors ranged from 0.20 to 0.53, indicating they were distinct constructs. The correlation between ethical accountability and hierarchical accountability as well as the correlation between efficiency and effectiveness were relatively strong ($r = .74$ and $r = .61$). These are understandable theoretically. The average for all correlation coefficients was 0.34. On average, the proportion of shared variance between any two variables was not high ($r^2 = 0.12$). This statistics implies that all factors are ready to be examined as causal relationships.

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[119] There can be another way to check this. If the square root of the AVE of each construct is larger than the construct's correlation with any other construct in the model, it implies discriminant validity (Fornell & Larcker, 1981).

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Table 21: Bivariate Correlations and Reliabilities

		1	2	3	4	5	6	7
1	Legal	(0.811)						
2	Hierarchical	0.533***	(0.887)					
3	Ethical	0.526***	0.741***	(0.949)				
4	Discretionary	0.210**	0.094	0.330***	(0.707)			
5	Compliance	0.291***	0.156*	0.269***	0.500***	(0.738)		
6	Effectiveness	0.267***	0.158*	0.246***	0.283***	0.332***	(0.543)	
7	Efficiency	0.379***	0.197**	0.299***	0.346***	0.388***	0.606***	(0.774)

Note: Cronbach's alpha in parentheses.

*$p < .05$, **$p < .01$, ***$p < .001$

In sum, CFA confirms the validity of each factor that is conceptually and statistically combined. Table 22 (below) contains the survey items included in the final model. Item M_7 (Learning from decision making tools such as Structured Decision-Making), which I identified as information strategy, is included in compliance strategy. This may be attributed to the fact that the Structured Decision Making tool is well disseminated to caseworkers by the Virginia state. Hence, they might comprehend learning from this tool as compliance to the state. All in all, seven constructs being investigated are well represented by observations.

Table 22: Survey Items Remained for Final Model

Q. Thinking about the past two years, please indicate the amount of pressure you have felt to do each of the following. (1= Very little, 7=Very much)

Legal accountability
  A1: Uphold federal regulations
  A2: Uphold state policy
  A4: Fulfill documentation requirements

Hierarchical accountability
  A8: Explain your actions to supervisors
  A9: Take responsibility for mistakes you made
  A11: Follow the direction of my supervisors

Ethical accountability
  A15: Maintain ethical standards
  A16: Maintain social values
  A17: Do the right thing at all times

Q. When you face conflicts between the items that were evaluated in Question 2, please indicate how important each of the following is. (1= Not at all important, 7= Extremely important)

Discretionary strategy
  M1: Using my professional judgment
  M2: Pursuing the best interest of the child

Compliance strategy
  M3: Following state child welfare policy
  M4: Following my agency's guidelines
  M7: Learning from decision making tools such as Structured Decision-Making

Q. Thinking about the past two years, please indicate how strongly you agree or disagree with each of the following. (1= Very strongly disagree, 7= Very strongly agree)

Effectiveness
  P1: My work unit has kept children safe.
  P2: My work unit has promoted positive change in families.
  P3: My work unit has met state mandates for job performance.

Efficiency
  P5: My work unit has brought in police support for joint investigation when appropriate.
  P6: My work unit has tried to work with families as soon as possible.
  P7: My work unit has not hesitated to bring matters to court if court action is needed.

5.4. SEM Analysis and Findings

Given that the measurement model has been examined and validated in a CFA analysis, the

focus in a SEM analysis in this section is testing structural relationships by examining three

issues: (1) overall and relative model fit, (2) structural parameter estimates, and (3) mediating

relationships.

5.4.1. Regression: Overall Relationship

Prior to the SEM analysis, I ran a regression analysis to approximate the significance of the overall relationship of AMP. Factor scores are calculated with all items of each accountability requirement (Factor score A), performance (Factor score P), and accountability management (Factor score M) component. I regressed the mediator (accountability management) on the independent variable (accountability) and the dependent variable (performance) on the mediator when controlling for the effect of the independent variable.

Table 23: Overall Regression and Mediating Effect

Beta	Factor score M	Factor score P	Factor score P
Factor score A	0.318***		0.251**
Factor score M		0.315***	0.201*
R-square	0.101	0.100	0.136
N=155			

A: Accountability, M: Accountability Management, P: Work Performance
*p < .05, **p < .01, ***p < .001

The results show that accountability in general, positively affects performance (A → P) and accountability management partially mediates the relationship between accountability and performance. As Baron and Kenny (1986) illustrate, a significantly attenuated independent variable (A) – dependent variable relationship (P) and the increase of R-square are evident. This regression result gives us a tentative estimate of the A → P relationship.

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5.4.2. AMP: Structural Model

I presented the AMP conceptual model (Figure 1 in Chapter 1) as well as the analytical model (Figure 4 in Chapter 3). The framework will explore the relationships among accountability, accountability management, and work performance, while taking into account the control variables. The model hypothesized that:

H1: Perceived formal accountability requirements weakly improve perceived work performance.
H2: Perceived informal accountability requirements strongly improve perceived work performance.
H3: Perceived accountability management mediates the relationship between accountability requirements and performance.

Findings

Structural modeling presents a set of relationships between exogenous and endogenous variables with causal effects. The standardized path coefficients (Beta) and R^2 are summarized in Table 24 and the final structural model is presented in Figure 14. All regression weights are standardized maximum likelihood estimates.

This structural model was developed from the CFA measurement model and shows acceptable fit ($\chi^2 = 253.824$, *df* = 151, *p* < .001, χ^2/df = 1.681, CFI= .943, GFI= .869, RMSEA= .066). Please note the Chi-square test statistic is not significant at .05, which suggests that the model fit is only acceptable. The relative chi-square (χ^2/df) is below the conservative rule-of-thumb criterion and RMSEA (.066) indicate a good fit. The Bollen-Stine bootstrap *p*-value was above .05 (*p* = .055), which indicates that the structural model is accepted.

Compared to the measurement model's GOF ($\chi^2 = 256.543$, *df* = 168, *p* < .001, χ^2/df = 1.527), the structural model fit was not worse than the CFA model. This means that the structural theory (i.e., the AMP model) has sufficient validity, indicating that the theoretical model predicted the observed input matrix relatively well (Hair et al., 2010). I attempted model

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modifications to this model to develop a better-fitting or more parsimonious model. However, I ended up keeping this model since it represented the most suitable theoretical point of view.

Table 24: Structural Path Coefficients and R^2

	Beta	t-value
Discretionary Strategy	(.181)	
Legal	.147	1.302
Hierarchical	−.373 **	−2.355
Ethical	.544 ***	3.558
Compliance Strategy	(.125)	
Legal	.247 **	2.529
Hierarchical	−.207	−1.478
Ethical	.300 **	2.248
Effectiveness (performance)	(.157)	
Legal	.130	1.236
Hierarchical	−.037	−0.230
Ethical	.097	0.606
Discretionary	.130	1.008
Compliance	.239 **	2.168
Efficiency (performance)	(.253)	
Legal	.267 **	2.537
Hierarchical	−.077	−0.501
Ethical	.107	0.693
Discretionary	.122	0.942
Compliance	.266 **	2.590

Note: Parentheses denote R^2
**p < .01, ***p < .001

As shown in Table 24, legal accountability requirement positively affects compliance strategy at a significance level of .01, which in turn positively affects effectiveness and efficiency. Ethical accountability requirement influences both strategies positively at a significant level .01 and .001. Hierarchical accountability negatively impacts discretionary

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strategy at a significant level .01. Although the path coefficients of hierarchical accountability requirement were not statistically significant, they showed negative relationships in any paths. Further discussions in detail will follow.

Control variables involve a single-item measure and are included in the model. Thus, I set factor loadings and error terms for single-item constructs. The former was fixed to the square root of the estimated reliability and the corresponding error term is set to 1.0 minus the reliability estimate (Hair et al., 2010, p.717). However, control variables—including gender, education, age, agency size, and work period—did not change the statistical directions of the effects of exogenous variables on endogenous variables. Analysis of variance (*t* test and ANOVA) results report that there are no statistically significant differences of perceived work performance among the child welfare caseworkers from different job type, job characteristics, agency type, and service region (see Appendix L).

Figure 14: Final Structural Model
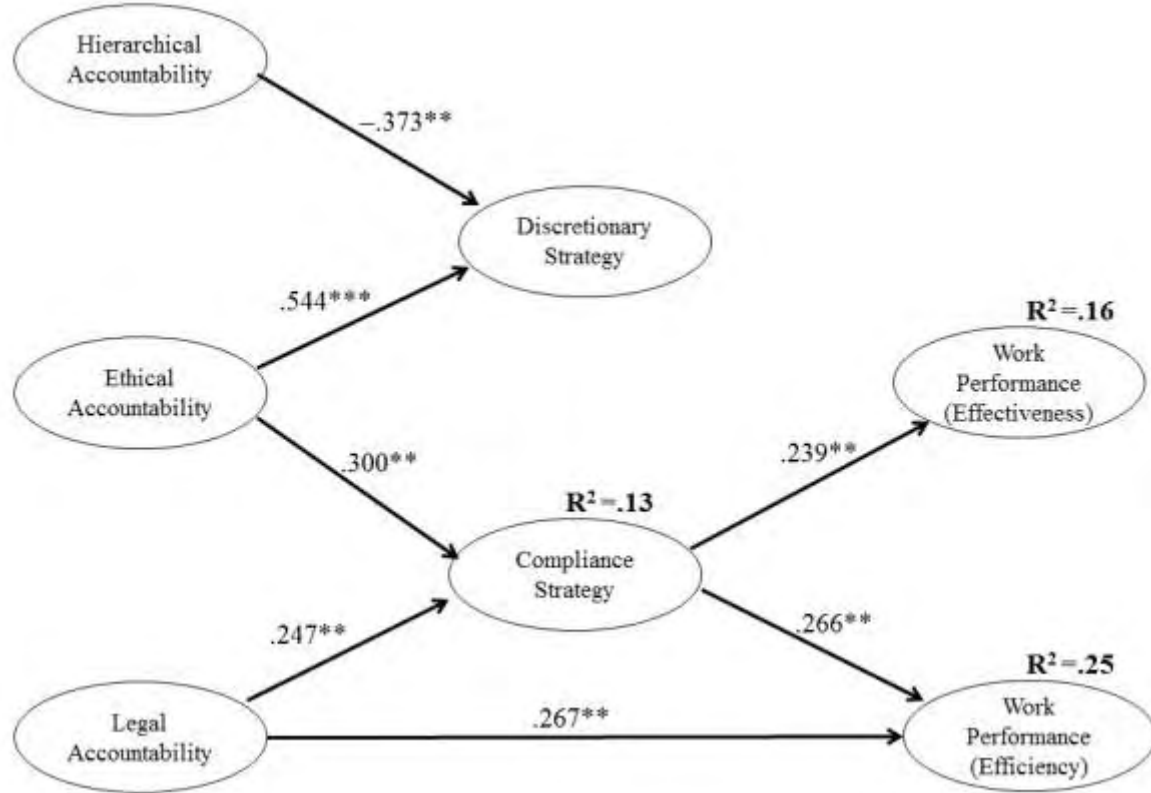
$\chi^2 = 253.824$, $df = 151$, $p < .001$, $\chi^2/df = 1.681$, CFI= .943, GFI= .869, RMSEA= .066
**$p < .01$, ***$p < .001$

Path Coefficients[120]

Figure 14 presents final structural model with path coefficients (standardized loadings).

The final structural model shows three types of accountability requirements: *hierarchical, ethical*

(professional),[121] *and legal accountability* (Romzek & Dubnick, 1987). Hierarchical

accountability requirements in child welfare services refer to taking responsibility for what

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[120] Figure 14 shows path coefficients that are statistically significant. "Statistical significance" means the likelihood that a result or relationship is caused by something other than mere random chance, which means that one may be very sure that a relationship exists (http://www.statpac.com/surveys/statistical-significance.htm). Statistical significance, however, does not guarantee "practical" significance (Hair et al., 2010, p.194). For example, based on the SEM analysis, I may advise child welfare workers to take note of a particular relationship because it may be relevant to their strategic plan rather than describing that a relationship is strategically important to them. Practical significance can be considered with the magnitude of the relationships and the proportion of shared variance between constructs (i.e., R^2) (Hojat & Xu, 2004).
[121] Strictly speaking, my study identified ethical accountability; yet some literature includes ethical accountability in professional accountability.

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caseworkers do and following hierarchical direction (e.g., supervisors). Ethical accountability requirements include maintaining ethical standards and social values. Legal accountability requirements mean upholding federal or state policy. Child welfare caseworkers also are expected to fulfill documentation requirements.

The analysis yielded two accountability management types: *discretionary and compliance strategy* (Kearns 1997). Discretionary strategy indicates that child welfare caseworkers manage accountability based on their professional judgment or best practice for their client. Compliance strategy refers to managing accountability through following the policy and guidelines. Work performance ended up having two dimensions: *effectiveness and efficiency*, which in part reflect the literature (Brewer & Selden, 2000). Effectiveness is related to achieving the child welfare service goal of serving children and families while efficiency is doing the job in a professional and a timely manner.

Although competing accountability demands may hinder work performance (Kim & Lee, 2010), my interviewees reported that accountability as a work expectation played an important role in their daily activity (Chapter 4). The chapter confirms and expands upon the role of accountability requirements. The final model (Figure 14 above) shows that the perceived accountability pressures differentially impacted employees' perceived work performance.

Caseworkers' perceived accountability requirements are significantly related to the importance of accountability management strategies, which in turn are associated with work performance. Ethical (β =.300, $p < .01$) and legal accountability requirements (β =.247, $p < .01$) positively influence compliance strategy at a statistically significant level. Both accountability requirements account for 13% of the variance in compliance strategy. The importance of compliance strategy will increase by .247 standard units for each one-unit increase in legal

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accountability requirements. A reported ethical accountability requirement's increase of one unit is associated with increase of compliance strategy by .300 and increase of discretionary strategy by .544. While the ethical accountability requirement strongly impacts the discretionary strategy in a positive way (β =.544, p < .001), the hierarchical accountability requirement negatively affects the importance of perceived discretionary strategy (β = −.373, p < .01) at a significant level. If the demand for hierarchical accountability was increased by one unit the importance of discretionary strategy would be expected to decrease by 0.373. Hence, hierarchical accountability demand may weaken the importance of discretionary strategy in child welfare services. The results show that ethical accountability requirement was more strongly associated with accountability management strategy than any other accountability requirements.

An increase in the level of importance of compliance accountability management was significantly associated with caseworkers' perception of high performance (effectiveness (β = .239, p < .01) and efficiency (β = .266, p < .01)). One unit increase of the importance of compliance strategy will result in the increase of effectiveness by .239 units and efficiency by .266 units. Following policy and guidelines are considered to be a good strategy for caseworkers to improve their work performance. The model in Figure 14 explains 16% of the data variation in effectiveness and 25% in efficiency. Other relationships between strategy (i.e., discretionary strategy) with work performance was not found to be statistically significant.

Legal accountability requirements positively influence work efficiency (β = .267, p < .01). The increase of one unit in perceived legal accountability is associated with the increase of perceived efficiency of work performance by .267. Even though the impact of legal accountability requirement on effectiveness was not significant at the structural model, legal accountability requirements also impact effectiveness positively in an independent relationship

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(see Figure 15 below). Likewise, even though ethical accountability requirement's effects on efficiency and effectiveness were not statistically significant in the full structural model (Figure 14), it impacts work performance (both effectiveness and efficiency) positively as seen in an independent relationship (see Figure 16 below). The hierarchical accountability requirement had a negative and insignificant effect on work performance.

Total, Direct, and Indirect Effects

Considering total effects on performance, the legal accountability requirement is more strongly related to efficiency ($\beta = .351$) while the ethical accountability requirement is associated more with effectiveness ($\beta = .239$) (see Table 25 below). Moreover, both have different ways of impacting performance. As presented in Table 25, ethical accountability indirectly impacts work performance. Conversely, legal accountability has a stronger direct effect on work performance. To put it concretely, one unit increase in the ethical accountability requirement associates with a direct increase in efficiency of .107 and an increase of .146 in an indirect way (for a total effect of .253). By contrast, one unit increase of the legal accountability requirement is associated with the increase of efficiency by .267 directly and by .083 in an indirect way (the total effect by .351). This is the same in case of effects on effectiveness. More detailed discussions of the direct and indirect effects are included in the section dealing with mediating effect analysis.

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Table 25: Direct/Indirect Effects of Accountability Requirements

Standardized Total Effects	Accountability			Accountability Management	
β	Ethical	Hierarchical	Legal	Compliance	Discretionary
Efficiency	**0.253**	-0.178	**0.351**	0.266	0.122
Effectiveness	**0.239**	-0.135	**0.208**	0.239	0.130
Standardized Direct Effects					
Efficiency	**0.107**	-0.077	**0.267**	0.266	0.122
Effectiveness	**0.097**	-0.037	**0.130**	0.239	0.130
Standardized Indirect Effects					
Efficiency	**0.146**	-0.100	**0.083**	0.000	0.000
Effectiveness	**0.142**	-0.098	**0.078**	0.000	0.000

In sum, legal and ethical accountability requirements positively impact work performance, whereas hierarchical accountability did not have a significant relationship with work performance. In particular, legal accountability requirement has a direct, positive impact on work performance, and ethical accountability requirement positively affects work performance in an indirect way. Findings also show that ethical and legal accountability requirements positively impact compliance strategy, which in turn positively affects work performance. Compliance strategy's possible mediating role was found in the relationship between accountability and performance, which will be discussed in detail in the following section.

Mediating Effects

Mediating effects of accountability management are initially observed from the overall regression (Table 23 in section 5.4.1) and the total, direct, and indirect effects (Table 25 in the previous section). I examined the mediating effects of accountability management in detail using an independent structural path. The analysis identified two distinct mediating paths through compliance strategy: legal accountability (A) – compliance strategy (B) – work performance (C)

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(*Mediation Effect 1*); and ethical accountability (A) – compliance strategy (B) – work performance (C) (*Mediation Effect 2*).

First, significant relationships between A and C were established. Legal accountability (Figure 15) and ethical accountability (Figure 16) were significantly related to effectiveness and efficiency ($\beta =.249$, $\beta =.371$ and $\beta =.253$, $\beta =.302$ respectively). I also found that both accountability types (A) significantly related to compliance strategy (B). Finally, B and C (effectiveness and efficiency) had significant relationships (Baron & Kenny, 1986). Then I assessed whether adding the mediating variable (B) changed the path estimates in the relationship between A and C (Hair et al., 2010).

The results (Figure 15 and Figure 16) demonstrate that accountability management (compliance strategy) plays a mediating role in the relationship between accountability and performance. A substantive improvement of model fit (e.g., a significant decrease in chi-square from 152.7 to 117.5 in mediation effect 1 and from 126.8 to 91.8 in mediation effect 2) supports this observation. Based on the estimated total effect of the legal accountability requirement on effectiveness and efficiency (a) in Figure 15), I can see that if the legal accountability requirement was increased one unit without holding compliance strategy constant, then work performance would increase 0.249 and .371 units respectively. If compliance strategy was increased by one standard unit, while legal accountability requirement was held constant, work performance would be expected to increase by .316 and by .340 (b). On the other hand, if the legal accountability requirement was increased by one unit, while holding compliance strategy constant, only efficiency would be expected to increase by .273, which is a decreased effect (b). Likewise, I can see that if the ethical accountability requirement was increased one unit without holding compliance strategy constant, then work performance would increase 0.253 and .302

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units respectively (a) in Figure 16). On the other hand, if the ethical accountability requirement was increased by one unit, while holding compliance strategy constant, only efficiency would be expected to increase by .203, which is also a decreased effect (b).

Different ways of mediating effects between legal accountability and ethical accountability are found. For instance, compliance strategy *mediates partially* the relationship between legal accountability requirement and efficiency and *mediates fully* the relationship between legal accountability requirement and effectiveness. However, it *mediates fully* both relationships between ethical accountability requirement and both performance constructs (effectiveness and efficiency). In the full model, the relationship between legal accountability and efficiency remained statistically significant with a decreased path estimate, while the relationship between legal accountability and effectiveness lost statistical significance; yet the indirect effects through compliance strategy remained significant. With regard to mediation effect 2, in the full model, the direct relationships between ethical accountability and both performance constructs (effectiveness and efficiency) were not statistically significant, but indirect effects through compliance strategy remained significant.

This is consistent with the direct and indirect effects of accountability on performance, where I observed the ethical accountability requirement is likely to affect performance in an indirect way; legal accountability requirement mostly impacts performance in a direct path. In short, compliance strategy mediates partially or fully the relationship between accountability and performance. The results demonstrate that assessing mediating effects was relevant to understanding the effect of accountability on performance.

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Figure 15: Mediation Effect 1

a)
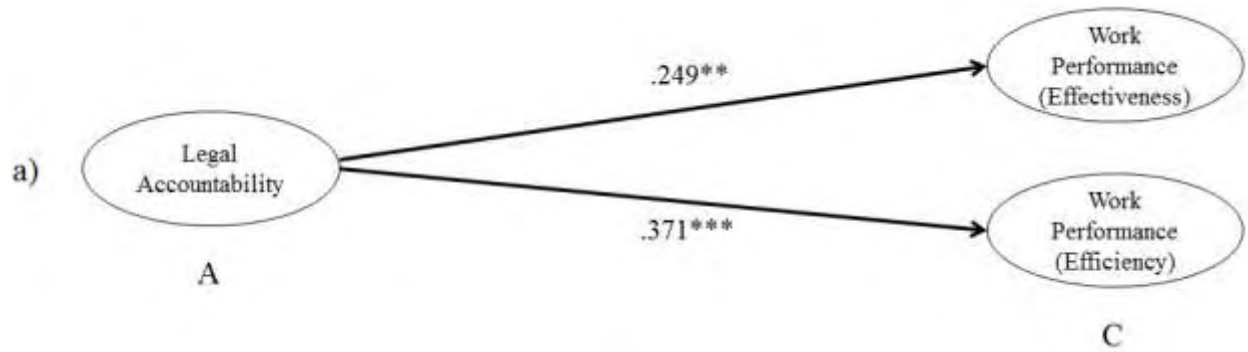
$\chi^2 = 152.738$, $df = 52$, $p < .001$, $\chi^2/df = 2.937$ (CFI= .877/ GFI= .863)

b)
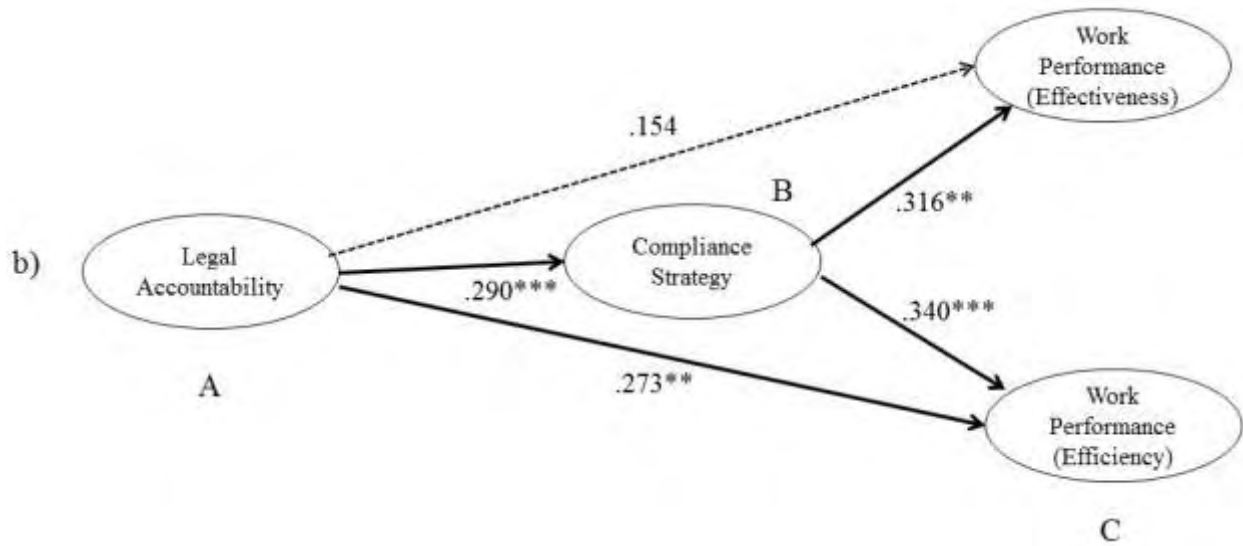
$\chi^2 = 117.495$, $df = 49$, $p < .001$, $\chi^2/df = 2.398$ (CFI= .917/ GFI= .894)

$**p < .01$, $***p < .001$

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Figure 16: Mediation Effect 2

a)
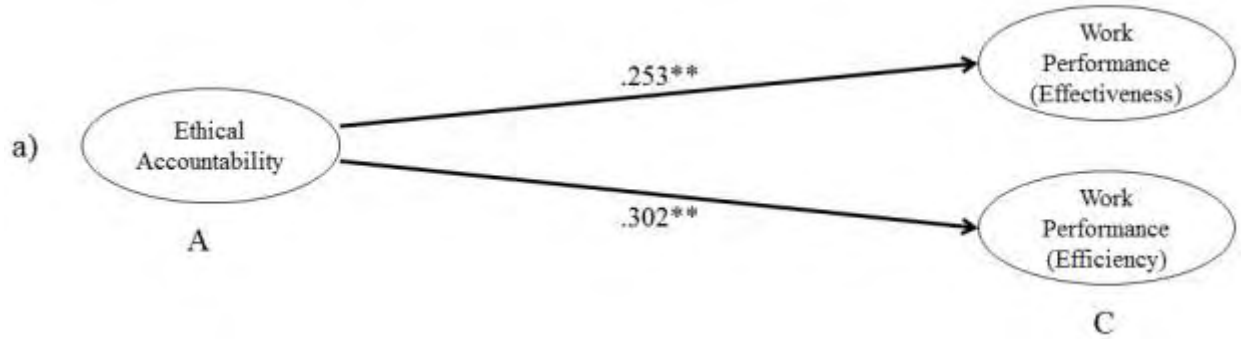
$\chi^2 = 126.804, df = 52, p < .001, \chi^2/df = 2.439$ (CFI= .928/ GFI= .883)

b)
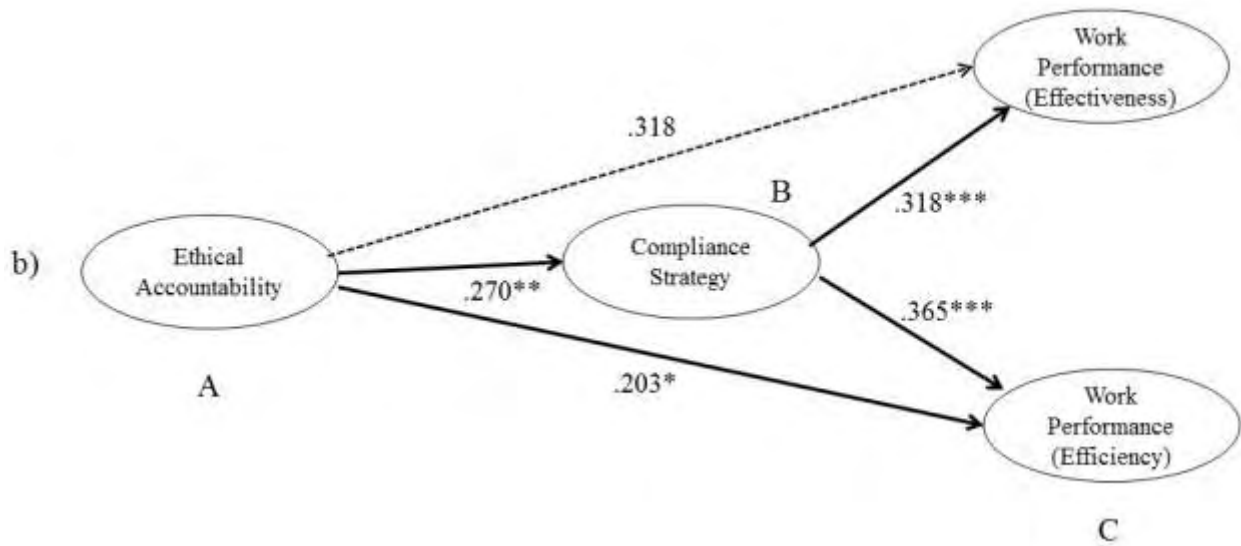
$\chi^2 = 91.788, df = 49, p < .001, \chi^2/df = 1.873$ (CFI= .959/ GFI= .917)
**p < .01, ***p < .001

Summary

According to SEM analysis, the findings generally support the hypotheses. Since the legal accountability requirement had a strong impact on performance while the hierarchical accountability requirement was not statistically significant (with negative path estimates), H1 is not supported. As expected, informal accountability such as ethical accountability requirements positively affect performance in an indirect manner (H2). Accountability management plays a critical role in mediating relationships (H3). Table 26 presents the results of the hypothesis tests.

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Table 26: Results of Hypothesis Testing

H1	Perceived formal accountability requirements weakly improve perceived work performance.	Not Supported
H2	Perceived informal accountability requirements strongly improve perceived work performance.	Supported
H3	Perceived accountability management mediates the relationship between accountability requirements and performance.	Supported

In summary, as the levels of legal mandates and ethical standards in a child welfare context increase, Virginia child welfare caseworkers manage these pressures using compliance strategy, so that their work performance increases. The extent to which caseworkers manage formal and informal accountability expectations may result in different levels of improvement in work effectiveness and efficiency.

5.5. Discussion

Understanding accountability and performance independently as well as in relationship is critical for public management studies because these fundamental concepts play important roles in defining how public problems are understood and addressed. Also, observing the mediating effects of accountability management is particularly relevant because they clarify the relationship between accountability and performance in public management and organization. The findings of my empirical study can be summarized:

1. General finding one: *Accountability positively affects performance*.
    1) Legal accountability is the most influential[122] accountability requirement for better performance (efficiency in particular) in the child welfare context.
    2) The ethical accountability requirement is more strongly associated with accountability management strategy (discretionary and compliance) than any other accountability requirements.

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[122] This interpretation is based on the path coefficients (Standardized estimates).

3) Emphasis on legal and ethical accountability requirements is associated with strong increases in efficiency and relatively weak increases in effectiveness.

4) Emphasis on the legal accountability requirement increases efficiency more than effectiveness; emphasis on an ethical accountability requirement may enhance both effectiveness and efficiency.

5) The legal accountability requirement is likely to affect performance in a direct way while an ethical accountability requirement is likely to impact performance in an indirect way.

6) The hierarchical accountability requirement has a negative and insignificant effect on work performance.

2. General finding two: *Accountability management matters*.

1) Compliance strategy plays a prominent role in child welfare context.

2) Compliance strategy mediates (fully or partially) the relationship between legal accountability requirement and performance.

3) Compliance strategy mediates fully the relationship between ethical accountability requirement and performance.

4) Accountability management should be considered in order for ethical accountability requirement to be connected to performance improvement.

One of the most important findings from this study centers on the causal relationship between accountability and the performance of caseworkers. In case of public child welfare services, legal, ethical, and hierarchical accountability are identified as factors related to performance.[123] Accountability is surely an answer for performance, as Romzek and Dubnick (1988) observed. Emphasis on legal and ethical accountability is associated with a strong increase in reported work efficiency and relatively weak increase in reported work effectiveness. This finding from the survey data is consistent with the results from the interview data, which shows that accountability greatly affects the role of child welfare caseworkers, and that they usually consider multiple accountability requirements in positive and constructive ways.[124] The

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[123] Comparatively speaking, compliance (legal/hierarchical), professional, and political accountability requirements are identified in non-profit sector (S. E. Kim & Lee 2010).

[124] However, the interviewees did not deny the tension between accountability requirements (see Chapter 4). This offers an idea that formal and informal accountability themselves are not a problem but an essential part of performance management, but the ultimate challenge remained might be the tension between them.

results support the argument of accountability theory that greater accountability will enhance governmental performance (Bouckaert & Halligan, 2008; Dubnick & Frederickson, 2011b).

As street-level activities involve a multi-dimensional web of relationships (Hupe & Hill, 2007), legal and ethical accountability are identified as prominent expectations in the child welfare system in Virginia. That legal accountability is reported as the most influential accountability requirement for child welfare caseworkers is in line with the literature (Noonan, Sabel, & Simon, 2009). Street-level workers work frequently under sets of redundant rules that guide their decision-making.[125] Child welfare systems often are managed through a steadily expanding regulatory framework that sets forth procedures, timeframes, documentation requirements, and review processes (Casey Family Programs, 2011). I found, however, that pressure for legal accountability is associated with efficiency more than effectiveness. By contrast, ethical accountability expectations are associated with both performance dimensions. This finding suggests the considerable role of informal accountability in management (Romzek, LeRoux, & Blackmar, 2012) for improving all aspects of performance. VDSS has strengthened its commitment to strategic planning and performance management by legal mandates (Ledden, 2011). The efforts to improve child welfare services without clarifying the impact of professional norms and ethics may fall short of a balanced orientation toward quality services.

The findings in this and the previous chapter have implications for scholarship on formal and informal accountability (Bovens, 2010; Maynard-Moody & Musheno, 2000). Although the literature finds that informal accountability is increasingly more important at the street-level

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[125] According to the qualitative part of the study (Chapter 4), the most important accountability requirements were 'the children/families they serve,' 'quality of service,' 'caseworkers themselves' and 'court decisions' (see Table 7 in section 4.2.1). Court decisions significantly influence caseworkers' work and decisions.

(also apparent in the child welfare context[126]), my data also acknowledge the importance of formal accountability requirements (legal accountability). As Romzek et al. (2012) have observed, sometimes both are conflicting[127]; thus one is discarded for the other (Romzek, LeRoux, Johnston, et al., 2012). For example, the limits of funding policy or a strict rule about 'visits' by the state may sacrifice meeting clients' needs. The structural model in this chapter highlights the important role of formal and informal (legal and ethical) accountability requirements for performance. As Lipsky (2010) observes, child welfare workers may not be bound by rules to make effective and reliable decisions.

The explicit and tacit effects of accountability on performance should be considered. My findings demonstrate that legal accountability requirements are likely to affect performance in a direct way, while ethical accountability requirements are likely to impact performance in an indirect way. In the AMP model of child welfare services, a one-unit increase in legal accountability is associated with a .351 unit increase (direct and indirect) in efficiency and a .078 unit increase (indirect) in effectiveness. A one-unit increase of ethical accountability is associated with a .146 unit increase (indirect) in efficiency and a .142 unit increase (indirect) in effectiveness. In child welfare services, statutes, regulations, and agency policies and procedures explicitly influence caseworkers' level of performance. An interviewee [Interviewee 27] participant illustrates this feature:

> We have expectations from the courts on cases where legal action was initiated by our agency. These include court reports, testifying, etc. Statistics are kept of each worker and also each agency across the state of how we meet the state expectations. If these numbers are not at acceptable levels, it could mean a low job performance (Interviewee 27).

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[126] Although most interviewees admit the importance of both formal and informal accountability, informal accountability is manifested in their decision making (see Chapter 4).
[127] This was discussed in section 4.3.1 of Chapter 4.

Conversely, ethical accountability had an indirect relationship with both performance dimensions. This result highlights the importance of careful attention to accountability mechanisms in social services. Lack of understanding of the implicit effect of ethical accountability might undermine the real picture of performance management (Meyers & Vorsanger, 2003) as ethical accountability requirements are more associated with performance through accountability management strategies than through other accountability requirements. Accordingly, this could imply that state governments can provide effective child welfare services when (1) informal accountability systems are developed and operated and (2) accountability management by caseworkers is well-conducted.

Acar et al. (2008) argue that "the accountability-performance link may have something to do with how managers respond to accountability pressures and transform the pressures into *management strategies*" (p. 17, emphasis added). Building upon this idea and other scholarship (Kearns, 1994; Posner, 2002; Romzek & Dubnick, 1987), my study confirms the preliminary perspective of accountability management, which argues that public servants are involved in identifying, defining, and managing diverse accountability expectations placed upon them, and that it matters for performance. My study is the first empirical attempt to identify the importance of accountability management. The literature has abstractly argued that multiple accountability requirements may not be a problem for organizational effectiveness as long as public employees can effectively manage and address them. There has been little development of knowledge on *how* they address them and w*hether* managing them *really matters*. Previously, 'managing accountability' was deemed to be a management-level practice. By contrast, my study suggests that front-line workers may manage multiple accountability requirements by using their

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discretion. My finding that indicates compliance strategies as the only significantly identified accountability management strategy point to areas where further research is needed.

Nevertheless, the results of my analysis show that accountability management has a different dynamic in the links between both legal accountability and performance and ethical accountability and performance. Compliance strategy mediates fully and partially the relationship between legal accountability and performance, and compliance strategy mediates fully the relationship between ethical accountability and performance. I demonstrated the importance of understanding the direct and indirect effects of accountability requirements on performance. I argue that we should pay careful attention to the role of accountability management, by which ethical accountability contributes to performance improvement. In brief, ethical accountability requirements may not lead to increased work performance unless a compliance strategy is well established among child welfare caseworkers.

The accountability management this study identified can be understood in part by Kearns's (1994) typology of strategic behaviors (compliance, negotiated, anticipatory, and discretionary strategies). Of these, compliance and discretionary strategies are reported in the child welfare context. A compliance strategy involves adhering to the law and the rules and being subject to oversight and periodic audits or evaluations. In the measurement and structural model, the question item M7, which was one of survey questions for information strategy, was integrated into the compliance strategy (with items M3 and M4) as one factor solution. This is understandable considering the similarities of items that were included in the final factor.[128] A discretionary strategy involves caseworkers' judgment based on an ethical code or their professional norms. It shapes and defines the norms and rules that workers believe will

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[128] The final accountability management items included were M3 (following state child welfare policy), M4 (following my agency's guidelines), and M7 (learning from decision making tools such as Structured Decision-Making).

eventually be imposed (Kearns, 1994, p. 189). Future study is imperative in order to clarify accountability management strategies.

A number of problems have been identified with performance measurement in child welfare including: (a) goal displacement whereby achieving targets supersedes meeting individual client needs; (b) the weak links between research on what constitutes good performance in child welfare and the performance indicators established by government; (c) a tendency to rely on cross sectional data and what is easily counted rather than what should be counted; and (d) failure to adjust for social and demographic factors that impact performance (Courtney et al., 2004). Among these, this study addresses (a) and (b) by increasing focus on accountability as an independent variable and the relationship with performance (Joaquin & Greitens, 2011; Kassel, 2008). After all, my study reinforces the existing literature (Dubnick, 2005) as I argue that service-oriented aspirations for better service provision come from relying on accountably as well as performance.

CHAPTER 6. CONCLUSION

This chapter concludes the dissertation by reiterating the key findings. It then discusses their implications and offers suggestions for future research.

6.1. Summary of findings

The purpose of this study was to investigate the importance that accountability has upon performance and the development of accountability management at the street-level. Prior to the survey portion of the study, qualitative content analysis of interview data provided several noteworthy findings.

Accountability and performance may be similar in terms of responsibility, serving children and community, following policy and guidelines, completing tasks, and ethics. Despite these similarities, accountability can be understood more with the terms: explanation, expectation, people/society, action/decision, and values. Conversely, performance can be considered more in line with the terms: productivity/outcome, timely work, team playing, learning, and strategy. Even though the interpretation might be limited because the conceptual distinction between accountability and performance might be hardly applicable in practice, the findings provide us with some insights for better public service provision. The incompatible characteristics found between accountability and performance give us an idea of the problem behind performance-driven accountability. My results empirically affirm the tension between requirements of accountability and those of effective administrative action, and thus contribute to the development of accountability theory and mechanisms (Behn, 2001; Bovens, 2005; Halachmi, 2002a, 2002b; Romzek & Dubnick, 1987).

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The quantitative part of study also presents notable findings: (1) Accountability *affects* performance directly and indirectly in a varied way, and (2) Accountability management *matters* in the relationship between accountability and performance. While the empirical literature on the A → P link focused on the competing accountability requirements' effect, my study examined each dimension of the accountability requirements' impact, which is a significant contribution to theory as well as practice. Formal (e.g., legal) as well as informal accountability requirements (e.g., ethical) are recognized critical for ensuring higher performance, which is consistent with the literature (Bovens 2010; Lipsky 1980; Mulgan 2000). Compliance strategy implicitly connects informal accountability requirement with work performance.

In brief, child welfare caseworkers provide services mainly under the ethical and legal accountability pressures. This accountability environment directly influences child welfare service efficiency in a positive way and indirectly affects child welfare service effectiveness in a positive way. Figure 17 portrays the findings of the study: the AMP model of child welfare.

Figure 17: AMP Model of Child Welfare
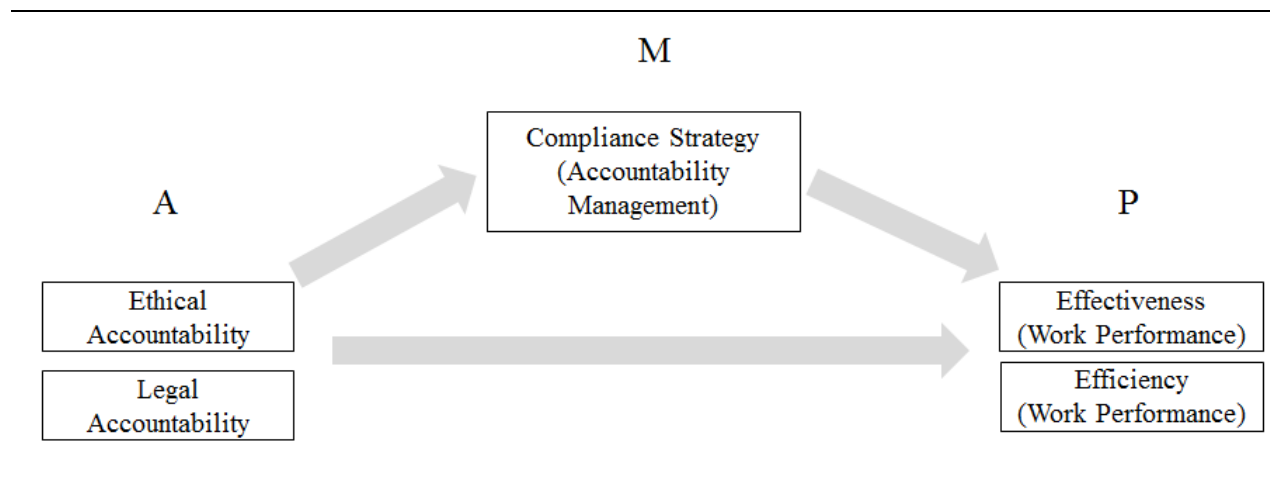
6.2. Implications

We have known that specific public organizations in the real world rarely feature unidimensional types of accountability and performance. Different types of organizations may have a number of different accountability types, and the weights placed on each accountability type could also be different depending on the environments within which the organizations operate. As a number of authors have suggested (e.g., Page, 2006), accountability in general is typically a web and mix of different accountability pressures. Performance is also understood in different ways by different people (Rainey & Steinbauer, 1999).

While I recognize this reality, this study, examines the extent to which the relative influence of components of accountability vary and their effects on work performance, is meaningful for the purpose of better understanding public management and for drawing out implications for practitioners. This study supports the current literature, which pays attention to the study of accountability. Some implications of this are discussed below.

First of all, my study offers empirical evidence of Dubnick and Frederickson's (2011b) normative proposition that greater accountability will enhance the government's performance. The findings support a basis for overcoming skepticism about the role of accountability and strongly argues that we must go beyond 'perfunctory accountability through performance' to take accountability seriously both as a substantive issue and as a management activity. This implies that more accountability is better for performance unless it results in too many arrangements to ensure accountability, which may prevent organizations from achieving their missions (Ebrahim, 2005), or which may increase job tension (S. E. Kim & Lee, 2010). The formal (responsiveness to explicit instructions or mechanism) and informal (bureaucratic professionalism or ethics) accountability requirements identified in my study highlight the need

for careful accountability mechanisms in social services. Lack of understanding the implicit effects of ethical accountability requirements might undermine the real picture of performance management because of the explicit and tacit effects of accountability on performance.

Also, the development of the concept of accountability management may serve as the foundation for future efforts to establish a theory or rationale for managing accountability and improving performance. Though the assumption that managing accountability matters in performance management is not new (Considine, 2002), this study offers the first empirical test of accountability management's mediating role, even at the street-level. The vocabulary and imagery of the front-line child welfare workers introduced by this study may vary based upon the organizational environment, but they can serve as the beginning stages of an accountability management tool.

Lastly, I propose several suggestions to practitioners in child welfare. In order to improve performance, public managers as well as caseworkers should understand and ensure the caseworkers' accountability management strategies. According to the interview, most caseworkers understood strategy as their strategic practice in general. Examples are strategic planning process such as the Practice Model embraced in VDSS and the Structured Decision Making process that caseworkers must utilize. This study suggested, however, that strategy is an act of managing accountability expectations rather than strategies for improving performance.[129] Caseworkers have known what they should do to achieve better performance. The point that I make is how managing accountability at the street-level matters when considering work performance. The child welfare system, thus, should educate case workers about accountability management tools such as compliance strategy, which will facilitate the accountability-

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[129] See Footnote 39 and section 2.3.1 in Chapter 2 for the detailed discussion.

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performance link in practice. For example, rather than just pushing caseworkers to follow law and policy (Kassel, 2008), caseworkers should be taught that following the guidelines could be a good strategy (compliance strategy) for managing accountability, leading to a good level of accountability and performance. This means that front line workers and their managers may develop their contextual compliance strategies for better performance.

In addition, comparative case study of compliance and discretionary strategies might serve as a relevant means for developing knowledge on caseworkers' practice. The child welfare field entails a dynamic accountability and performance context. For instance, greater emphasis on accountability comes from both the government and its policies and from stakeholders and citizens. The questions as to when certain strategies are needed and how they operate should be discussed explicitly between caseworkers as well as supervisors or managers. For instance, when caseworkers commonly follow the court decisions of family reunification, they may need to argue that the child in case should still be preserved under the child welfare system. In this case, child welfare workers can formulate or develop useful information on why they need a more discretionary strategy than the compliance strategy. Caseworkers sometimes need to deprioritize activities with parents but instead increase other activities such as child visits, while guidance pushes caseworkers toward family reunification. While the content of compliance strategies might be unique depending on the street-level context, the comparative studies of different strategies may build a generalized knowledge of street-level workers' accountability management.

The specific contents of strategies should be further studied and identified. Moreover, formal and informal accountability requirements should be well-identified and discussed before they are applied to the design of performance systems. In particular, it should be acknowledged

that informal accountability requirements' (e.g., ethical accountability) impact on performance is tacit, and likely to be embedded in accountability management, as scholarly works acknowledge (Friedrich, 1940).

6.3. Future Research

By limiting the focus of this study to the child welfare caseworkers in Virginia, this study worked with a relatively small sample size for SEM analysis. This evokes the limitation of the legitimacy and generalizability of the findings, although many of the findings shed some important light on public management, performance management, and child welfare services. Thus, it is necessary for future studies to examine the measurement model of AMP with extended samples in different contexts. In addition, other key relevant organizational concepts and relationships (e.g., culture and internal discourse) or variations in the arena of social welfare policy (e.g., resource availability and macroeconomic forces) should be included in the AMP model.[130] This will help researchers to see the changes on the magnitude of the relationship between accountability and performance within a stronger model.

Further research is needed on why the hierarchical accountability requirement[131] has a negative relationship with work performance as well as with accountability management in the child welfare context. One possible explanation is that child welfare caseworkers may comprehend hierarchical accountability demands as "red tape" which refers to "rules, regulations, procedures that remain in force and entail a compliance burden but do not advance the legitimate

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[130] This limitation of the study is already discussed in detail in section 3.4 of Chapter 3.
[131] The questionnaires include A8 (explain your actions to supervisors), A9 (take responsibility for mistakes you made), and A11 (follow the direction of my supervisors).

purposes the rules were intended to serve" (Bozeman, 2000, p. 12). Red tape has negative consequences in organizational performance (DeHart-Davis & Pandey, 2005).

Also, clarity is needed on why the discretionary strategy was not connected to work performance. The literature finds that the discretion used by street-level workers can have a positive effect on their work performance (Rainey & Steinbauer, 1999). One might suppose that resource constraints with unrelenting demands to meet performance measures in child welfare context may limit how workers can use their discretion (Brodkin, 2012). While compliance strategy plays a prominent role in child welfare context, other strategies should be further examined in a different part of the public sphere. Given the relatively small sample study, future studies should replicate this study's efforts on a larger scale or different populations.

I planned to examine effectiveness, efficiency, and fairness of performance as in the literature, but the construct of fairness receded during the data reduction process. A plausible explanation might be the weak measurement and relatively less-developed concept of fairness in practice than effectiveness and efficiency. More research on fairness as a performance dimension is necessary.

Potential for comparative study exists both within public administration and across disciplines. For instance, the accountability management model could be compared with the model that Tetlock (1985) suggested, where individuals are viewed as politicians who react to accountability in ways that optimize their position within the social system.

My study finds that as the level of legal and ethical accountability requirements in a child welfare context increases, child welfare caseworkers' perceived work performance will subsequently increase. Of course, this raises several questions: What is the acceptable level of accountability requirements for better performance? And how can we know that empirically?

6.4. Concluding Remarks

Over the years, public administration scholars have paid attention to accountability (Behn, 2001; Bovens, 2005; Romzek & Dubnick, 1987; Yang, 2012). But, a mismatch has existed regarding the effects of accountability; and less attention has been paid to accountability due to trends emphasizing performance measurement. In addition, there have been few studies that sought to integrate accountability and performance literature with the literature on street-level work. Moreover, little knowledge has developed on whether child welfare agency management matters (Wells, 2006). This study fills these gaps by examining empirically the relationships among accountability, accountability management strategy, and work performance in a context of child welfare in Virginia—all fundamental to improving government's ability to meet increasing challenges.

My research addresses the "performance illusion." Arguably, the appeal of performance can improve the responsiveness of government (Amirkhanyan, 2011; Yang, 2011). However, we have already seen that performance itself is not a medicine that automatically leads to effectiveness (Yang & Hsieh, 2007). My study shows that accountability and accountability management matters, and calls for the reconsideration of accountability. I am convinced that a significant break-through in enhancing government work performance requires a deeper understanding of the role of accountability and accountability management in a performance measurement system. As scholars and practitioners alike continue to look to accountability as the critical facilitator to effective and efficient government, the knowledge of accountability and performance will be advanced further and thereby approaching better quality service.

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Appendix A: Flow of Child Welfare Cases

Overview of steps cases follow through child protective and child welfare systems in the United States (Schene, 1998, p. 31)
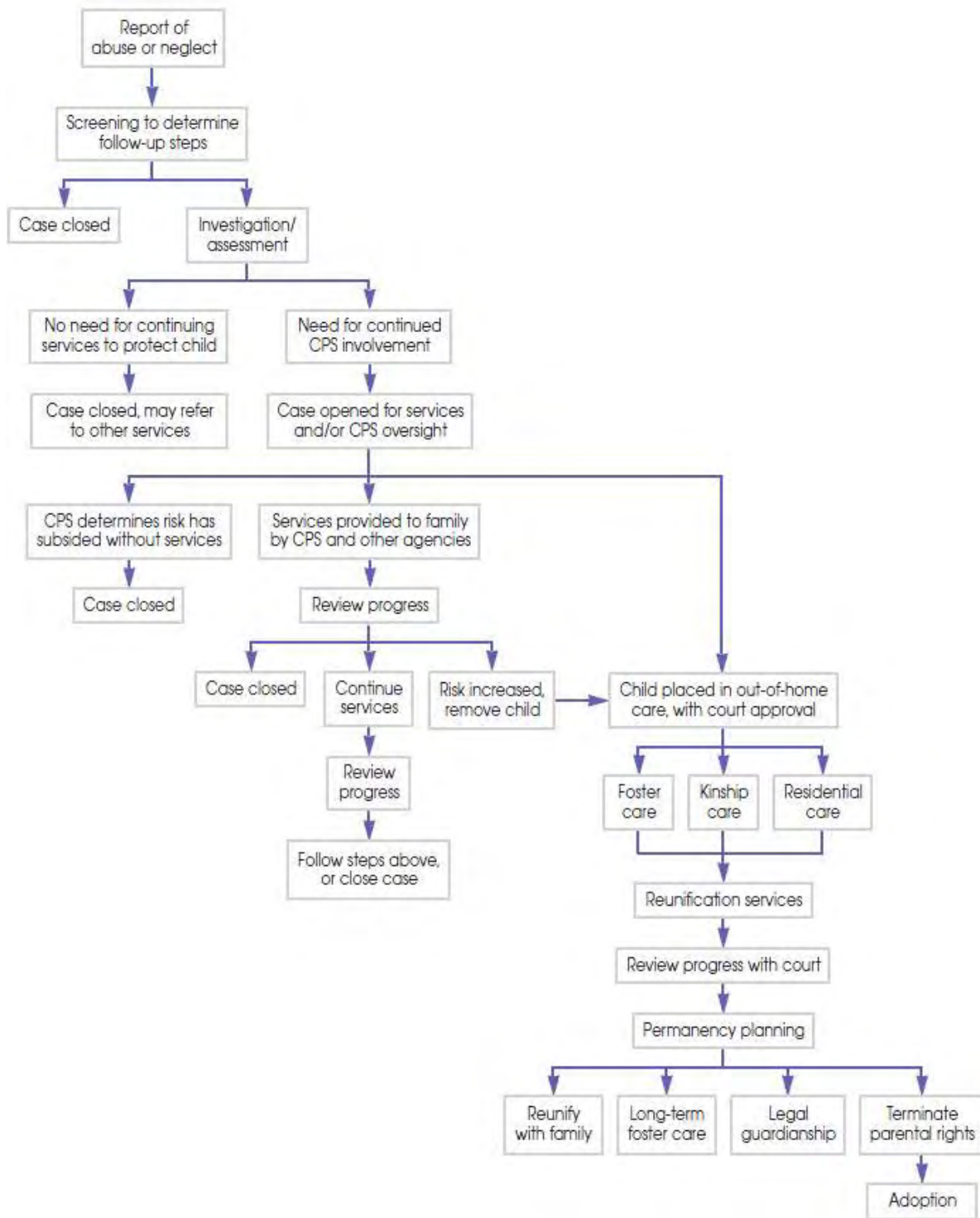
Appendix B: VT IRB Approval

VirginiaTech

Office of Research Compliance
Institutional Review Board
2000 Kraft Drive, Suite 2000 (0497)
Blacksburg, VA 24060
540/231-4606 Fax 540/231-0959
email irb@vt.edu
website http://www.irb.vt.edu

MEMORANDUM

DATE:	March 5, 2013
TO:	Laura Smietanka Jensen, Kwang Seon Hwang
FROM:	Virginia Tech Institutional Review Board (FWA00000572, expires May 31, 2014)
PROTOCOL TITLE:	The Impact of Accountability and Accountability Management on Performance at the Street Level
IRB NUMBER:	12-880

Effective March 5, 2013, the Virginia Tech Institution Review Board (IRB) Chair, David M Moore, approved the New Application request for the above-mentioned research protocol.

This approval provides permission to begin the human subject activities outlined in the IRB-approved protocol and supporting documents.

Plans to deviate from the approved protocol and/or supporting documents must be submitted to the IRB as an amendment request and approved by the IRB prior to the implementation of any changes, regardless of how minor, except where necessary to eliminate apparent immediate hazards to the subjects. Report within 5 business days to the IRB any injuries or other unanticipated or adverse events involving risks or harms to human research subjects or others.

All investigators (listed above) are required to comply with the researcher requirements outlined at:

http://www.irb.vt.edu/pages/responsibilities.htm

(Please review responsibilities before the commencement of your research.)

PROTOCOL INFORMATION:

Approved As:	**Exempt, under 45 CFR 46.110 category(ies) 2**
Protocol Approval Date:	**March 5, 2013**
Protocol Expiration Date:	**N/A**
Continuing Review Due Date*:	**N/A**

*Date a Continuing Review application is due to the IRB office if human subject activities covered under this protocol, including data analysis, are to continue beyond the Protocol Expiration Date.

FEDERALLY FUNDED RESEARCH REQUIREMENTS:

Per federal regulations, 45 CFR 46.103(f), the IRB is required to compare all federally funded grant proposals/work statements to the IRB protocol(s) which cover the human research activities included in the proposal / work statement before funds are released. Note that this requirement does not apply to Exempt and Interim IRB protocols, or grants for which VT is not the primary awardee.

The table on the following page indicates whether grant proposals are related to this IRB protocol, and which of the listed proposals, if any, have been compared to this IRB protocol, if required.

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VT IRB Amendment Approval

VirginiaTech

Office of Research Compliance
Institutational Review Board
North End Center, Suite 4120, Virginia Tech
300 Turner Street NW
Blacksburg, Virginia 24061
540/231-4606 Fax 540/231-0959
email irb@vt.edu
website http://www.irb.vt.edu

MEMORANDUM

DATE:	May 8, 2013
TO:	Laura Smietanka Jensen, Kwang Seon Hwang
FROM:	Virginia Tech Institutional Review Board (FWA00000572, expires April 25, 2018)
PROTOCOL TITLE:	The Impact of Accountability and Accountability Management on Performance at the Street Level
IRB NUMBER:	12-880

Effective May 8, 2013, the Virginia Tech Institution Review Board (IRB) Chair, David M Moore, approved the Amendment request for the above-mentioned research protocol.

This approval provides permission to begin the human subject activities outlined in the IRB-approved protocol and supporting documents.

Plans to deviate from the approved protocol and/or supporting documents must be submitted to the IRB as an amendment request and approved by the IRB prior to the implementation of any changes, regardless of how minor, except where necessary to eliminate apparent immediate hazards to the subjects. Report within 5 business days to the IRB any injuries or other unanticipated or adverse events involving risks or harms to human research subjects or others.

All investigators (listed above) are required to comply with the researcher requirements outlined at:

http://www.irb.vt.edu/pages/responsibilities.htm

(Please review responsibilities before the commencement of your research.)

PROTOCOL INFORMATION:

Approved As:	**Exempt, under 45 CFR 46.110 category(ies) 2**
Protocol Approval Date:	**March 5, 2013**
Protocol Expiration Date:	**N/A**
Continuing Review Due Date*:	**N/A**

*Date a Continuing Review application is due to the IRB office if human subject activities covered under this protocol, including data analysis, are to continue beyond the Protocol Expiration Date.

FEDERALLY FUNDED RESEARCH REQUIREMENTS:

Per federal regulations, 45 CFR 46.103(f), the IRB is required to compare all federally funded grant proposals/work statements to the IRB protocol(s) which cover the human research activities included in the proposal / work statement before funds are released. Note that this requirement does not apply to Exempt and Interim IRB protocols, or grants for which VT is not the primary awardee.

The table on the following page indicates whether grant proposals are related to this IRB protocol, and which of the listed proposals, if any, have been compared to this IRB protocol, if required.

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Appendix C: VDSS IRB Approval

VDSS IRB Approval (Interviews)

March 14, 2013

Kwangseon Hwang
Virginia Tech University
Center for Public Administration and Policy
109 Draper Road
Blacksburg, VA 24060

Dear Mr. Hwang:

The Virginia Department of Social Services Institutional Review Board (VDSS IRB) has reviewed the study protocol entitled "Accountability Management at the Street Level: The impact of formal and informal accountability on the child welfare program performance in Virginia" on 11/8/2012. The IRB conducted an expedited review of your study proposal and provided feedback on 12/4/2012. Among the recommendations, we requested that you: 1) send a copy of the approval letter from the Virginia Tech IRB, 2) consult with local department staff on the wording of your interview and survey instruments, and 3) consult with the VDSS Department of Family Services on how to disseminate the interview and survey to local department staff in your sample. Based on information communicated by phone and email on 3/5/2013, 3/7/2013, and 3/14/2013, we are glad to learn that you have followed up on these specific requests. We endorse the idea of the interview instrument being sent via email by the CPS Regional Consultant on your behalf to the sample participants.

The IRB approves the implementation of the first phase of the study (online semi-structured interview) to a sample of 50 LDSS employees. The approval is in accordance with federal regulations 45 CFR 46, Virginia Administrative Code 22 VAC 40-890 and 22 VAC 40-910. We request that you re-submit the general survey for review by the IRB after you have completed your analysis of the first phase data. The first phase of the study is approved for a term of one year (through 3/13/2014), after which you can apply for yearly extensions by submitting the Continuation Form (located on the IRB web site: http://www.dss.virginia.gov/about/irb.cgi).

As part of this approval, we ask that you comply with the following requirements:
1. Inform the IRB immediately of any changes that occur to the study protocol.
2. Please keep the IRB informed on a yearly basis about the progress of your study by submitting the Continuation Form. Please submit the Continuation Review form within one month prior to the expiration date.
3. Upon completion of the entire study, submit a copy of the final report to the VDSS IRB.
If you have any questions, please contact me at 804-726-7490 or gail.jennings@dss.virginia.gov. We wish you every success in this research project.

Sincerely,
Gail Jennings, Chair
VDSS Institutional Review Board

VDSS IRB Approval (Survey)

May 17, 2013

Kwangseon Hwang
Virginia Tech University
Center for Public Administration and Policy
109 Draper Road
Blacksburg, VA 24060

Dear Mr. Hwang:
The Virginia Department of Social Services Institutional Review Board (VDSS IRB) reviewed materials for Phase II of your study, entitled "Accountability Management at the Street Level: The impact of formal and informal accountability on the child welfare program performance in Virginia", on 3/28/2013. Based on an initial review and suggested changes requested by the IRB Coordinator, we received a revised version of the survey and email invitation on 5/8/2013. We also received a copy of the approval by the Virginia Tech IRB. The IRB conducted an expedited review of the second phase of your study on 5/17/2013.

The IRB approves the implementation of the second phase of the study (online survey) to CPS case workers at all agencies. The approval is in accordance with federal regulations 45 CFR 46, Virginia Administrative Code 22 VAC 40-890 and 22 VAC 40-910. The second phase of the study is approved for a term of one year (through 5/16/2014), after which you can apply for yearly extensions by submitting the Continuation Form (located on the IRB web site: http://www.dss.virginia.gov/about/irb.cgi).

As part of this approval, we ask that you comply with the following requirements:
1. Inform the IRB immediately of any changes that occur to the study protocol.
2. Please keep the IRB informed on a yearly basis about the progress of your study by submitting the Continuation Form. Please submit the Continuation Review form within one month prior to the expiration date.
3. Upon completion of the entire study, submit a copy of the final report to the VDSS IRB.
If you have any questions, please contact me at 804-726-7490 or gail.jennings@dss.virginia.gov. We wish you every success in this research project.

Sincerely,
Gail Jennings, Chair
VDSS Institutional Review Board

Appendix D: Interview Questionnaires

I am Kwangseon Hwang, a doctoral candidate in the Center for Public Administration and Policy at Virginia Tech. I am working on my PhD dissertation, which studies the impact of accountability and accountability management on work performance at the street level.

The questions that follow are designed to gather information from caseworkers in the Virginia Child Welfare program. They explore your perceptions of how an individual experiences a particular work environment. Your answers are very important to my study. The questions are for academic purposes only, and your responses will remain anonymous and confidential. All responses to the interview questions will be reviewed only by the research team. The *Qualtrics* software I am using is designed to delete any participant identifiers (email address, computer IP address) in the data file. Participating and completing the written interview is voluntary. You may decline to participate in this written interview or stop participating at any time.

If you have questions about this study, please feel free to contact me at kwangs7@vt.edu (540-808-9440) or my dissertation advisor, Dr. Laura Jensen, at jensen7@vt.edu and Virginia Tech IRB chair Dr. David Moore at moored@vt.edu. Thank you.

● Which of the following describes your job most accurately? (Please choose one response.)
1) Child protective service (CPS) worker
2) In-home protective service worker
3) Foster care and adoption worker
4) Multiple child welfare program worker
5) Front-line supervisor
6) Other (Please specify:)

● Where is your service region?
1) Western
2) Piedmont
3) Central
4) Northern
5) Eastern

● For how many years have you worked in child welfare services (in Virginia or elsewhere)?
 (   )

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1. **What does *accountability* mean to you?**

   ┌───┐
   │   │
   │   │
   │   │
   └───┘

2. **To whom or to what are you accountable? Please rank the importance of each of the following as *a source of accountability*, ranging from 5= very important to 1 = not important at all.**

   a. Your supervisor
   b. The children you serve
   c. The families you serve
   d. Case procedure
   e. Agency rules
   f. State policy
   g. State legislative budget
   h. State legislative oversight actions
   i. Local cost of providing services
   j. Court decisions
   k. The community
   l. My co-workers
   m. Your profession/ professional norms
   n. Quality of service
   o. Interests groups
   p. Yourself
   q. Others (   )
   r. Others (   )

3. **Please provide specific *examples of the accountability requirements* in your work environment that you numbered "5 (very important)" in question 2.**

   ┌───┐
   │   │
   │   │
   │   │
   └───┘

4. **Please refer to your answers for question Number 2. Do any of the different accountability requirements that you face *conflict* with each other? If so, which ones? Please explain how they conflict.**

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5. How do you *cope with* any conflicts between accountability requirements? <u>Please be as specific as possible</u> in describing your personal *strategies* for coping with these conflicts.

6. Do you think that those accountability requirements influence *your activities* at work? If so, how?

7. How do you define good work *performance*?

Thank you for helping me to better understand your work environment.
Your time and input are invaluable. Thank you!
Kwangseon Hwang/ Center for Public Administration and Policy/Virginia Tech

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Appendix E: Survey Questionnaires

I am Kwangseon Hwang, a doctoral student in the Center for Public Administration and Policy at Virginia Tech. I am working on my PhD dissertation, and I am interested in learning more about the experience of child welfare workers.

The survey that follows is designed to gather information from child welfare program caseworkers in Virginia. **The questions are for academic purposes only, and your responses will remain anonymous and confidential**. **All responses to the survey will be reviewed only by the research team. The *Qualtrics* survey software that I am using will delete any participant identifiers (e.g., email address, computer IP address) in the data file. Participation in the survey is voluntary and your consent to participate will be implied when you return the completed questionnaire.**

Your responses are very important to my research. Once this study is completed, I will share the results with you. Please try to answer each question to the best of your ability.

If you have questions about this study, please feel free to contact me at kwangs7@vt.edu (540-808-9440); my dissertation advisor, Dr. Laura Jensen, at jensen7@vt.edu; or the Virginia Tech IRB chair Dr. David Moore at moored@vt.edu. Thank you.

For each statement below, please choose the one response option that best fits your experience or views. Should you wish to change your answers, you may do so any time before submitting the survey.

[Perceived Work Performance]

1. *Thinking about the past two years, please <u>indicate how strongly you agree or disagree with each of the following.</u>* (1= Very strongly disagree, 7= Very strongly agree)

- *My work unit has kept children safe.*
- *My work unit has promoted positive change in families.*
- *My work unit has met state mandates for job performance.*
- *My work unit has responded in a timely manner to allegations of abuse.*
- *My work unit has brought in police support for joint investigation when appropriate.*
- *My work unit has tried to work with families as soon as possible.*
- *My work unit has not hesitated to bring matters to court if court action is needed.*
- *My work unit has provided suitable placements for children, such as in foster care, when necessary.*

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[Accountability Requirements]

2. *Thinking about the past two years, please <u>indicate the amount of pressure</u> you have felt to do each of the following.* (1= Very little, 7=Very much)

- *Uphold federal regulations*
- *Uphold state policy*
- *Follow court decisions*
- *Fulfill documentation requirements*
- *Respond to the community*
- *Serve children*
- *Serve families*
- *Explain your actions to supervisors*
- *Take responsibility for mistakes you made*
- *Improve the quality of child welfare services*
- *Follow the direction of my supervisors*
- *Learn your role as a caseworker*
- *Cooperate with co-workers*
- *Increase professional capacity for child welfare service provision*
- *Maintain ethical standards*
- *Maintain social values*
- *Do the right thing at all times*

[Accountability Management]

3. *When you face conflicts between the items that were evaluated in Question 2, please indicate <u>how important each of the following is.</u>*
(1= Not at all important, 7= Extremely important)

- *Using my professional judgment*
- *Pursuing the best interest of the child*
- *Following state child welfare policy*
- *Following my agency's guidelines*
- *Consulting with my supervisor, regional consultant, or co-workers*
- *Communicating with official institutions such as the court or legislature*
- *Learning from decision making tools such as Structured Decision-Making*
- *Getting information from others outside of my work place*

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Background

● **Which of the following describes your job most accurately? (Please choose <u>one</u> response.)**
1) Child protective service (CPS) workers
2) Foster care and adoption workers
3) Foster care and prevention workers
4) Multiple child welfare program workers
5) General social workers
6) Other (Please specify:)

● **Please select the statement below that best describes your agency.**
1) State public child welfare agency (i.e., formally designated or statutory)
2) County (or multi-county) public child welfare agency
3) Private child/family serving agency that works under contract with public child welfare agency(ies) to provide services.
4) Private child/family serving agency that does not work under contract with public child welfare agency(ies)
5) Other (Please specify:)

● **In a typical week, on which of the following do you spend more of your time? (Please choose one response.)**
1) Intake
2) Investigation
3) Family assessment
4) On-going services
5) Supervision
6) Other (Please specify:)

● **What is your service region?**
1) Western
2) Piedmont
3) Central
4) Northern
5) Eastern

● **For how many years have you worked in child welfare services (in Virginia or elsewhere, including part-time employment)?**
1) 0-5 yrs
2) 6-10 yrs
3) 11-15 yrs
4) 16-20 yrs
5) 21+ yrs

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● **Roughly, how many people are employed at the place where you work?**
1) Less than 26 FTE
2) 26 to 80 FTE
3) More than 80 FTE

● **What is your highest level of education?**
1) High school diploma or under
2) Associate's (two-year) degree
3) Bachelor's or Baccalaureate (four-year) degree
4) Master's degree (including MPA or Master of Social Work)
5) Ph.D. (including professional degrees of MD and JD)
6) Others (specify:)

● **What is your age?**
1) 18-29 years
2) 30-39 years
3) 40-49 years
4) 50-59 years
5) 60 years or older

● **Are you male or female?**
1) Male
2) Female

Thank you for participating!
Your time and input are invaluable.
Kwangseon Hwang/ Center for Public Administration and Policy/Virginia Tech

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Appendix F: Content Analysis of Accountability

Meaning Units (Examples)	Key theme	Category
Responsibility for the impact that your <u>actions</u> have Being personally responsible for your <u>action, decisions</u>, work ethics, and willing to verbally acknowledge when you are not right. I will <u>do</u> what I say I am going to do. <u>Doing</u> what you say you will do. Responsibility for your <u>actions</u>, words, work and presentation. Taking <u>responsibility for decisions</u> made with or without others involved. Being responsible for <u>actions</u> and how they relate to others. Being responsible of all of my <u>actions</u> to everyone that I come in contact with and to everyone that my <u>actions or decisions</u> may impact. Being able to be available and make <u>decisions</u> that are informed decisions that can be defended if need be. To recognize how we can do our jobs better, be as <u>effective</u> as possible Best of your <u>professional</u> abilities.	*Doing* *Action* *Decision* *Effective* *Professional* *Better job*	***Professional Accountability***
<u>Following</u> and seeking the best available <u>guidance and policies</u> Meeting <u>the goals and standards</u> of the State Dept. of Social Services. I am responsible for my work product and <u>the results</u> of my work product. <u>Proficient</u> and <u>timely</u> to persons who require a service Being responsible for the actions in which you partake, <u>reporting</u> Having the <u>knowledge</u> of <u>the policies and regulations</u> as it pertains to the organization. <u>Knowing</u> what is required of your <u>role/position</u> <u>Micro management</u> of the smallest resources allotted to the neediest people in our society.	*Following* *Goals* *Timely* *Reporting* *Knowledge* *Guidance* *Policies* *Role* *Management*	***Hierarchical Accountability***
Upholding <u>the guidance and procedures</u> as required by Virginia law <u>Completing</u> and maintaining the responsibilities of your job description Being responsible in <u>carrying out my duties</u> and being able to work <u>fulfilling task</u> assigned or I see that need <u>completing.</u> Being held responsible for <u>the work</u> that you have <u>completed</u> and documented as your own <u>Completing</u> your <u>task/responsibility</u> in a timely manner, in full/to completion, without error, in accordance with policy/guidance/law/etc., <u>Completing the tasks</u> necessary in completing the objective. Persons/system that you are <u>responsible</u> to and for	*Procedures* *Fulfilling* *Completing* *Job/task* *Law* *Responsibility*	***Legal Accountability***
Give answers and <u>explanations</u>	*Explanations*	***Political***

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Checks and balances Taking responsibility for <u>mistakes</u> made, feedback/positive criticism, self reflection and supervision to analyze what could have been done differently, better, or what was done well. Continue your <u>role and responsibility</u>. Following through and meeting <u>expectations</u>. <u>Blame</u> you and rake you over the coals when <u>mistakes</u> are made. <u>Quality</u> of work Do amazing things with a tiny amount or <u>resources</u> Held accountable for <u>the action</u> I take in the <u>case and money</u> I spend on services and providers. <u>Serving families</u> in the community with the highest standards of customer <u>service</u> and compassion The well-being and care of the <u>children</u> on my caseload Resources allotted to the neediest <u>people</u> in our <u>society</u>.	*Expectations* *Quality* *Responsibility* *Community* *Service* *Mistakes* *Blame* *Money* *Serving* *Children* *Families* *People* *Society*	***Accountability***
<u>Own</u> what you believe in. <u>Owning</u> it! Take <u>ownership</u> Being responsible and taking <u>ownership</u> of the work that I have done. Doing what is <u>right</u>, the right way and working independently when needed. The <u>ethical standards</u> and tenets of our discipline. Social work <u>values</u>, a good work <u>ethic</u>, and respect for all humans regardless of their life circumstances. <u>Personal responsibility</u> for ones actions, choices, and behavior. Being <u>respectful</u> to others taking into account policy and mandates and <u>having integrity around those.</u> <u>Integrity</u> to persons who require a service <u>Honest</u> and forthcoming <u>A word</u> that also impacts my own family, friends, and my own well-being.	*Owning* *Ethics* *Values* *Right* *Integrity* *Honest* *Word* *Respec*t	***Ethical Accountability***

Appendix G: Content Analysis of Performance

Meaning Units (Examples)	Key theme	Category
Doing what you can for the good of the <u>client</u> Made sure <u>children</u> are safe Protecting <u>children</u> Working WITH the <u>child and family</u> to prepare a Prevention Plan that will improve the situation for the child and family Successfully guiding a <u>child and/or family</u> to make positive changes Keeping <u>children safe</u> and promoting positive change in families Developing and following an <u>effective</u> case plan For job <u>performance</u>	*Client Serving children and family Safe Effective Performance*	***Service effectiveness***
Did everything asked of me by <u>policy, procedures, supervisor</u> Working within <u>policy guidelines</u> and job performance requirements Abiding by <u>state and local policy</u> Being knowledgeable of the <u>policy, laws and expectations</u> for job performance Meeting <u>state mandates</u>. Being able to do your job as best as you can <u>following policy and statue</u>	*Following policy guidance Mandates Statue*	
Responsibility <u>Productivity</u> Having good <u>time management</u> and being as <u>efficient</u> as possible in handling those tasks Being a <u>positive liaison</u> in the community for the agency and specifically Child Welfare Do I accept responsibility and <u>make corrections</u> when necessary <u>Outcomes</u>. The better you do at providing services early on, using strengths to build on barriers, the greater the outcome will be more positive than negative	*Time management Liaison Corrections Productivity Efficiency Outcome*	***Efficient work and Responsibility***
Maintaining <u>work schedule</u> Completing tasks in a <u>timely manner</u> Answering phone calls in a <u>timely manner</u> Showing up at the <u>time scheduled</u> for home visits and appointments Making best effort to be <u>timely</u> with required paperwork Including <u>timely response</u> based on the allegations, bringing in police support for joint investigation when appropriate, effective interview strategies for the child, engagement of the family at the earliest opportunity, developing an ironclad safety plan if necessary, utilizing extended family and community when available, no hesitation if court action is needed, making a timely disposition, and insuring that whatever services are needed are in place before case closure	*Schedule Timely response Timely work*	

Keeping your word of what and when you will accomplish tasks assigned Being diligent in completing work in an accurate and timely manner Maintaining complete and accurate records The people in my department can rely on me to do my job well The best services possible Keeping up with paperwork Keeping OASIS and all documents updated and current	*Paperwork* *Best services* *Completing work* *Responsibility*	
Representing yourself as a professional while dealing with conflict or differences which will be present at times Conducting oneself in a professional manner - in speech and dress Dress appropriatey, do I act appropriately in the worker place and in my interactions with others. Performance is not just what I produce (case plans, etc.) but how I represent the profession and my agency. Being prepared for meetings - inside and outside of agency and court Moving on after conflict and disappointment	*Professionalism* *Acting appropriately* *Profession* *Being prepared* *Plan*	*Professionalism*
Contribute special skills/talents as needed. Am I constantly striving to be a better social worker, a life long learner, open to change, new knowledge and other perspectives. Be willing to entertain new ideas and/or strategies Contributing positive solutions and efforts to those solutions if accepted	*Skills* *Knowledge* *Strategy* *Solution* *Learning*	
Being a team member, remembering that we all need help at times. Being willing to do tasks outside of your normal work - being a team player Be a team player Supporting my coworkers in every way possible	*Team playing* *Member* *Coworkers*	
Treating clients and co-workers with fairness and respect Having a strong work ethic, integrity and respectful of others Adhering to policy with a truthful approach. For example, in removing a child it is best to let the person get out their anger and wait for them at a time they have had time to process the removal. Trying to problem solve during the initial removal process can be difficult. Provide good casework (including case documentation and planning, not just service delivery), do not "cut corners", and are always ethical in their practice. Reliable, integrity in how I practice social work, being thoughtful and therapeutic in how case decisions are made. When I have put forth my best effort. Sometimes it is not the end result, because I cannot change others only myself. I want to know I have provided the tools and the way for others to be successful. Go the extra mile on my own accord, meeting my deadlines, producing good/excellent work (well written, grammatically correct, social work based, etc.). Avoiding error but owning up to your mistakes/oversights	*Fairness* *Respectfulness* *Ethic* *Integrity* *Good casework* *Reliable* *Best effort* *Owning*	*Fairness/ Values*

Appendix H: Content Analysis of Accountability Management

Meaning Units (Examples)	Key theme	Category
The best <u>interest of that child</u> and the child's safety The best <u>interest of the child</u> and document carefully The <u>ethical code</u> of my profession <u>Ethical decision-making trees</u> that can be found online I strive to get with I need <u>for customers</u> as best as I can. The <u>choices and decisions</u> I make I want to ensure that I am doing what I deem in necessary and appropriate in a case. Sticking to the <u>facts and professional</u> judgment	*Interest of child* *Ethical code* *Customer* *Decisions* *Facts* *Professional*	***Discretionary Strategy***
<u>Follow the policy</u> for my job <u>Follow policy</u> to gather accurate information and make the best decisions possible. <u>Policy or guidelines</u> to ensure that I am following them to the best of my ability. <u>What policy says</u> verses inhouse policy and attempt to resolve the conflict in my head	*Following Policy Guidelines*	***Compliance Strategy***
<u>Communication</u> with the court, legislature, etc. in regard to child welfare law and guidance <u>Speak out</u>; I complain to folks who I think can make a difference, I participate on committees and policy work groups to try and be a voice for children and to make a difference. Express any frustration with <u>coworkers</u> who may be able to relate. <u>Supervisory consultations</u> and documented those. <u>Let others know</u> that in this particular case, the law is a barrier to the best interest of a child. I consult with all who are involved and will seek legal counsel if necessary. The issue needs to continue to be visible to adjust for change if necessary. Talk to my <u>supervisor</u>; vent to my <u>peers</u>. <u>My supervisor</u> as a resource in helping me sort through how to balance accountability requirements. <u>Immediate supervisor or Regional consultant</u>. <u>Regional Specialist</u> or contact or agency attorney to get any clarifications that are needed. <u>Regional specialist</u> or program manager The workers/directors <u>Supervision for guidance</u> and an opportunity to "vent". coworkers and supervisor who are always able to bring me back to perspective when conflict has started to impact my case management decision making.	*Communication* *Consultations* *Talk* *Supervision* *Supervisor* *Coworker* *Speak out* *Regional specialist*	***Communication Strategy***

Talk it out with <u>supervisor</u> and figure out a way to best meet the needs of my clients while also abiding by policy.		
<u>Education</u> - making sure that our agency promotes permanency, safety, and keeping families together. <u>Structured Decision Making, a computer program</u> that helps workers sort out and look at the factors that go into various decisions. <u>Learn</u> as much as I can through training or consulting written guidance. <u>Listening</u> - making sure that even if our agency disagrees with an interest group that we take their <u>feedback</u> and try to improve our service <u>Talk</u> things through with friends, coworkers, and family (without revealing client information, of course) to help me make the right decision. Gather all of the <u>information</u> that I need, schedule a meeting to discuss the issue, review all options/action plans, and develop a plan or solution that everyone can live with.	*Education* *Listening* *Learning* *Information*	***Information Strategy***

Appendix I: Descriptive Analysis after Data Transformation

	N	Minimum	Maximum	Mean	Std. Deviation
P1_Fourth	155	1	2401	1728.916	778.29309
P2_Cubed	155	1	343	236.5742	106.99793
P3_Fourth	155	1	2401	1484.576	771.0126
P4_Fourth	155	1	2401	1779.383	753.89534
P5_Fourth	155	1	2401	1895.062	728.1539
P6_Fourth	155	1	2401	1843.916	717.97148
P7_Fourth	155	1	2401	1640.676	796.12226
P8_Fourth	155	1	2401	1644.93	805.90138
A1_Cubed	155	1	343	220.3032	111.98988
A2_Cubed	155	1	343	242.265	108.80263
A3_Cubed	155	1	343	249.1448	109.87856
A4_Cubed	155	1	343	249.1742	112.07338
A5_Squared	155	1	49	31.7161	14.7568
A6_Cubed	155	1	343	240.7192	114.15277
A7_Cubed	155	1	343	233.3108	115.23249
A_8	155	1	7	5.0065	1.80366
A_9	155	1	7	5.281	1.75979
A_10	155	1	7	5.1677	1.72762
A_11	155	1	7	5.4194	1.61917
A_12	155	1	7	4.9477	1.73875
A_13	155	1	7	4.8815	1.71674
A_14	155	1	7	5.1234	1.50034
A_15	155	1	7	5.3871	1.78153
A_16	155	1	7	5.1032	1.80969
A_17	155	1	7	5.4053	1.84967
M1_Fourth	155	1	2401	1803.192	729.41763
M2_Fourth	155	16	2401	2123.639	570.70651
M3_Squared	155	9	49	40.7742	10.32935
M4_Squared	155	9	49	40.3262	9.97096
M5_Cubed	155	27	343	270.2839	87.7804
M6_Cubed	155	1	343	241.2057	100.3005
M_7	155	1	7	5.2968	1.66778
M_8	155	2	7	5.3161	1.49351

Appendix J: Assessment of normality (Measurement Model)

Variable	min	max	skew	c.r.	kurtosis	c.r.
P3_Fourth	1.000	2401.000	-.065	-.333	-1.238	-3.146
P7_Fourth	1.000	2401.000	-.418	-2.122	-1.227	-3.118
P6_Fourth	1.000	2401.000	-.771	-3.920	-.843	-2.142
P5_Fourth	1.000	2401.000	-1.049	-5.334	-.272	-.692
P2_Cubed	1.000	343.000	-.376	-1.913	-1.246	-3.167
P1_Fourth	1.000	2401.000	-.568	-2.888	-1.149	-2.919
M_7	1.000	7.000	-.965	-4.907	.222	.565
M4_Squared	9.000	49.000	-.870	-4.421	-.053	-.135
M3_Squared	9.000	49.000	-.974	-4.950	.018	.046
M2_Fourth	16.000	2401.000	-1.975	-10.037	3.139	7.977
M1_Fourth	1.000	2401.000	-.703	-3.575	-.867	-2.203
A_17	1.000	7.000	-1.174	-5.969	.287	.728
A_15	1.000	7.000	-1.038	-5.274	.021	.052
A_16	1.000	7.000	-.787	-4.002	-.396	-1.006
A_8	1.000	7.000	-.762	-3.875	-.375	-.953
A_9	1.000	7.000	-1.021	-5.192	.172	.437
A_11	1.000	7.000	-1.056	-5.369	.414	1.053
A1_Cubed	1.000	343.000	-.266	-1.351	-1.273	-3.235
A2_Cubed	1.000	343.000	-.575	-2.921	-1.020	-2.593
A4_Cubed	1.000	343.000	-.762	-3.872	-.803	-2.041
Multivariate					91.792	19.262

Appendix K: Correlation and Anti-image Matrix

Accountability: Correlation Matrix

	A1_Cubed	A2_Cubed	A3_Cubed	A4_Cubed	A5_Squared	A6_Cubed	A7_Cubed	A_8	A_9	A_10	A_11	A_12	A_13	A_14	A_15	A_16
A1_Cubed	1															
A2_Cubed	0.802	1														
A3_Cubed	0.619	0.720	1													
A4_Cubed	0.393	0.575	0.472	1												
A5_Squared	0.449	0.567	0.646	0.452	1											
A6_Cubed	0.473	0.619	0.751	0.431	0.706	1										
A7_Cubed	0.456	0.598	0.755	0.418	0.740	0.943	1									
A_8	0.337	0.425	0.476	0.381	0.423	0.46	0.486	1								
A_9	0.322	0.452	0.516	0.388	0.529	0.555	0.548	0.693	1							
A_10	0.308	0.437	0.490	0.376	0.597	0.671	0.675	0.433	0.555	1						
A_11	0.380	0.526	0.542	0.403	0.583	0.622	0.622	0.724	0.765	0.567	1					
A_12	0.265	0.361	0.538	0.304	0.524	0.578	0.546	0.499	0.651	0.589	0.624	1				
A_13	0.184	0.309	0.458	0.256	0.551	0.569	0.550	0.408	0.615	0.633	0.596	0.775	1			
A_14	0.279	0.419	0.416	0.355	0.526	0.518	0.541	0.435	0.575	0.622	0.507	0.636	0.686	1		
A_15	0.398	0.539	0.646	0.348	0.595	0.739	0.725	0.545	0.662	0.650	0.648	0.696	0.669	0.652	1	
A_16	0.381	0.491	0.599	0.337	0.580	0.702	0.686	0.475	0.608	0.649	0.597	0.689	0.648	0.609	0.902	1
A_17	0.327	0.49	0.565	0.351	0.589	0.724	0.726	0.455	0.581	0.575	0.589	0.614	0.578	0.591	0.796	0.786

Note: All items are significant at .01 significance level.

Accountability: Anti-image Correlation

	A1_Cubed	A2_Cubed	A3_Cubed	A4_Cubed	A5_Squared	A6_Cubed	A7_Cubed	A_8	A_9	A_10	A_11	A_12	A_13	A_14	A_15	A_16
A1_Cubed	.851a															
A2_Cubed	-0.64	.864a														
A3_Cubed	-0.136	-0.261	.941a													
A4_Cubed	0.153	-0.328	-0.071	.921a												
A5_Squared	-0.067	-0.027	-0.099	-0.125	.972a											
A6_Cubed	-0.011	-0.106	-0.028	-0.062	0.074	.903a										
A7_Cubed	0.034	0.099	-0.254	0.08	-0.253	-0.774	.882a									
A_8	-0.066	0.084	-0.086	-0.114	0.087	0.132	-0.113	.912a								
A_9	0.018	0.013	-0.049	-0.048	-0.033	-0.022	0.086	-0.283	.957a							
A_10	0.005	-0.013	0.153	-0.086	-0.074	-0.08	-0.136	0	-0.037	.971a						
A_11	0.039	-0.183	0.151	0.021	-0.101	-0.029	-0.06	-0.408	-0.328	-0.027	.931a					
A_12	-0.037	0.151	-0.228	-0.011	0.008	-0.108	0.178	-0.055	-0.086	-0.029	-0.099	.938a				
A_13	0.092	0.076	-0.043	0.075	-0.129	-0.072	0.069	0.165	-0.079	-0.138	-0.158	-0.401	.928a			
A_14	0	-0.151	0.195	-0.087	-0.051	0.182	-0.155	-0.062	-0.097	-0.176	0.17	-0.141	-0.297	.930a		
A_15	0.062	-0.089	-0.114	0.12	0.081	-0.082	0.009	-0.116	-0.081	0.011	-0.008	0.007	-0.068	-0.148	.927a	
A_16	-0.108	0.073	0.01	-0.033	-0.026	0.001	0.022	0.06	0.019	-0.146	0.021	-0.13	-0.018	0.068	-0.64	.921a
A_17	0.11	-0.084	0.118	-0.019	-0.035	-0.051	-0.158	0.048	-0.05	0.128	-0.034	-0.074	0.06	-0.096	-0.173	-0.242

a Measures of Sampling Adequacy(MSA)

Performance: Correlation Matrix

	P1_Fourth	P2_Cubed	P3_Fourth	P4_Fourth	P5_Fourth	P6_Fourth	P7_Fourth	P8_Fourth
P1_Fourth	1							
P2_Cubed	0.663	1						
P3_Fourth	0.424	0.414	1					
P4_Fourth	0.495	0.405	0.497	1				
P5_Fourth	0.325	0.287	0.324	0.478	1			
P6_Fourth	0.448	0.396	0.33	0.615	0.519	1		
P7_Fourth	0.409	0.252	0.363	0.429	0.607	0.477	1	
P8_Fourth	0.549	0.444	0.402	0.48	0.405	0.463	0.573	1

Note: All items are significant at .01 significance level.

Performance: Anti-image Correlation

	P1_Fourth	P2_Cubed	P3_Fourth	P4_Fourth	P5_Fourth	P6_Fourth	P7_Fourth	P8_Fourth
P1_Fourth	.824a							
P2_Cubed	-0.509	.784a						
P3_Fourth	-0.053	-0.174	.888a					
P4_Fourth	-0.148	0.022	-0.288	.853a				
P5_Fourth	0.076	-0.081	-0.023	-0.155	.831a			
P6_Fourth	-0.052	-0.108	0.084	-0.384	-0.208	.871a		
P7_Fourth	-0.128	0.176	-0.107	0.039	-0.433	-0.112	.791a	
P8_Fourth	-0.204	-0.117	-0.067	-0.101	0.035	-0.074	-0.358	.887a

a Measures of Sampling Adequacy(MSA)

Accountability Management: Correlation Matrix

	M1_Fourth	M2_Fourth	M3_Squared	M4_Squared	M5_Cubed	M6_Cubed	M_7	M_8
M1_Fourth	1							
M2_Fourth	0.563	1						
M3_Squared	0.336	0.394	1					
M4_Squared	0.305	0.299	0.839	1				
M5_Cubed	0.298	0.306	0.565	0.597	1			
M6_Cubed	0.382	0.335	0.511	0.469	0.431	1		
M_7	0.294	0.268	0.478	0.381	0.417	0.435	1	
M_8	0.39	0.15	0.316	0.319	0.408	0.505	0.533	1

Note: All items are significant at .01 significance level except the correlation between M_8 and M_2 (significant at .05).

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Accountability Management: Anti-image Correlation

	M1_Fourth	M2_Fourth	M3_Squared	M4_Squared	M5_Cubed	M6_Cubed	M_7	M_8
M1_Fourth	.744a							
M2_Fourth	-0.504	.700a						
M3_Squared	0.015	-0.176	.736a					
M4_Squared	-0.051	0.105	-0.734	.727a				
M5_Cubed	0.020	-0.103	-0.050	-0.269	.916a			
M6_Cubed	-0.069	-0.106	-0.152	-0.043	-0.055	.907a		
M_7	0.033	-0.074	-0.258	0.121	-0.096	-0.060	.828a	
M_8	-0.280	0.213	0.110	-0.040	-0.171	-0.305	-0.380	.728a

a Measures of Sampling Adequacy(MSA)

Appendix L: Analysis of Variance (ANOVA)

DV: Effectiveness (performance)

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Job	Between Groups	145.131	44	3.298	1.151	.275
	Within Groups	315.217	110	2.866		
	Total	460.348	154			
Agency	Between Groups	8.682	44	.197	.502	.994
	Within Groups	42.857	109	.393		
	Total	51.539	153			
Work	Between Groups	70.088	44	1.593	1.294	.143
	Within Groups	132.971	108	1.231		
	Total	203.059	152			
Region	Between Groups	60.863	44	1.383	.817	.773
	Within Groups	184.539	109	1.693		
	Total	245.403	153			

DV: Efficiency (performance)

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Job	Between Groups	120.874	35	3.454	1.211	.223
	Within Groups	339.474	119	2.853		
	Total	460.348	154			
Agency	Between Groups	5.480	35	.157	.401	.999
	Within Groups	46.059	118	.390		
	Total	51.539	153			
Work	Between Groups	31.021	35	.886	.603	.957
	Within Groups	172.038	117	1.470		
	Total	203.059	152			
Region	Between Groups	66.026	35	1.886	1.241	.196
	Within Groups	179.376	118	1.520		
	Total	245.403	153			

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