National HRD: a new paradigm or reinvention of the wheel?

Greg G. Wang
The University of Texas at Tyler, Tyler, Texas, USA

Received 10 September 2007
Revised 16 October 2007
Accepted 4 December 2007

Abstract

Purpose – The purpose of this paper is to analyze a new research topic, national human resource development (NHRD) for neglected but critical components of economics foundation and accumulated international development research and practices.

Design/methodology/approach – Through a targeted literature review on NHRD writing, major development economics theory, and international development literatures, this study conducted a critical content analysis.

Findings – The findings in the paper are: current research on NHRD has not advanced our knowledge in economic development, human development, and human resource development under different cultural contexts; the HRD concept used by economists means human development (HD), the domain of HRD should not be extended to HD and HRD scholars should understand the different meaning of the same terms used in different fields determined by the contextual and historical background of the field; NHRD should be renamed as HRD national policy studies, and should be firmly based on economic foundation and incorporating accumulated knowledge in international development. Otherwise, the idea of NHRD is to reinvent the wheel with much less scholarly rigor.

Research limitations/implications – HRD research should be firmly based on its theoretical foundations and accumulated knowledge in other related areas. HRD should not define itself by a concept defined by another field, even with the same wording.

Practical implications – As HRD national policy studies, HRD professionals may contribute economic development by analyzing HRD-related policy implementation and propose policy recommendations by working with existing development communities.

Originality/value – This paper is important for HRD scholars to explore a new research and practice frontier. It calls attention to properly positioning HRD's role in national economic development and clarifies some misunderstandings in the NHRD literature.

Keywords Economics, Human resource development, Economic development, Labour market

Paper type Research paper

Globalization and transitioning economies received increased attention from human resource development (HRD) scholarly in recent years. A topic termed as national HRD (NHRD) has emerged in the literature. In a broader sense, most NHRD writings highlighted national socio-cultural contexts in different developing countries with issues arguably related to specific HRD components (e.g. Lynham and Cunningham, 2006; McLean *et al.*, 2004). Apparently, the establishment of such new paradigm was due to a recent "rediscovery" (McLean, 2006, p. 9) of an earlier use of a term, human resource development, by Harbison and Myers (1964), and a corresponding four levels of country typology. While the new paradigm seems to be exciting and promising, it is necessary to clarify some premises and theoretical foundations, and HRD's role in national economic development. It is also important to rationalize some critical fundamental issues at the initial stage of such research in order to properly define the domain of the research and add new knowledge and theoretical strengths to HRD theory base. This study is an attempt to achieve this goal.

Journal of European Industrial Training
Vol. 32 No. 4, 2008
pp. 303-316

0309-0590
DOI 10.1108/03090590810871397

Purpose and significance

Current articles in NHRD frequently referred to some economic concepts, such as poverty, labor market, unemployment, and national economic performance, growth etc. (e.g. Lynham and Cunningham, 2006; Cho and McLean, 2004) without referring to economic development literature. It is, thus, essential to identify what do we already know and do outside the new NHRD paradigm in the foundational field and the international development communities. It is also important to understand why economists first used HRD concept, and why HRD scholar should not be surprised with such a "rediscovery." Therefore, the purpose of this study is to:

- present economic foundational theory of HRD as it relates to current NHRD research from its historical context;
- investigate why the HRD concept was first created by economists, and how HRD used by the economists is different from the HRD as a profession and a discipline through the evolution of economic theory; and
- identify the role of HRD in national economic development based on an analysis of existing NHRD literature.

This study is critical for three reasons. First, although economics is considered a foundation of HRD, HRD scholars' understanding of the foundation has been confined in human capital theory. While Wang and Holton (2005) extended our understanding to institutional economics, a wealth of other economics theories that are equally important to HRD research has yet known to HRD scholars. Second, current research on HRD in developing countries crossed two important fields of economics: human capital theory in labor economics and development economics. Without the knowledge of current research in both, existing literature in NHRD may appear to reinvent the wheel with much less research rigor. Third, as a mature discipline, the historical development of economics theories may offer important lessons to HRD's endeavor on theory building and exploring new research frontiers. This is particularly important to HRD as it is in the process of struggling to establish its unique identity as a discipline and a field of study.

In what follows, I first present a review of development economics that directly relates to NHRD literature. Particularly, Harbinson and Myers' (H-M) study (1964) will be reviewed from its historical and theoretical contexts due to its particular importance to NHRD writings. I then move to review and analyzing the NHRD literature, followed by a discussion on the implications of the analysis.

Development economics

Development economics is a branch of economics that studies the economic progress and policies of nations, or economic transformation of developing countries and measurement of national economic performance (Ghatak, 1995; Basu, 1997a; Ray, 1998). Although historically rooted in orthodox economics since Adam Smith, development economics emerged as a separate sub-discipline after the Second World War when policies of almost all nations switched the focus to economic development in less developed countries (LDCs). The initial effort was represented by the works of Lewis (1954) and Schultz's(1964).

Early economic development theory was merely an extension of mainstream economic theory that equated "development" with "growth" and industrialization (Ghatak, 1995). It presumed that with the industrialization and the growth of gross domestic product (GDP), the improvements of the life quality of developing countries' poor will follow automatically (e.g. Lucus, 1988). However, the reality was that not only have most developing countries experienced a decrease in the share of income accruing to the poorest 60 percent, but also resulted in declines in the absolute income levels of the poor. Meanwhile, in the political arena, the interactions of social forces of modernization and existing power structure have led to certain degree of instability and internal violence, as well as less participatory forms of political structure. A general conclusion from development economics at the time is that political power and economic welfare in those countries is unequally distributed and the economic development processes of the 1950s and 1960s have not led to the intended result on massive improvements in the welfare of the poor, but have increased inequity (Adelman, 1974).

Rostow's theory of development stages

Earlier development economists consider developing countries as "primitive" versions of developed nations that could, with sufficient time, "develop" the institutions and standards of living of Europe and North America. This view is reflected in Rostow's (1959, 1971, 1990) five stages of economic growth:

(1) *The traditional society*. It is based on structures developed with limited production functions and pre-Newtonian technology. A society is mostly agricultural-based. The social structure and political powers were ruled and controlled by landowners. It may experience limited innovation and improvement of production technologies, yet with a "ceiling" (1971, p. 4) on the level of attainable output. The ceiling was caused by the fact that "the potentialities which flow from modern science and technology were either not available or not regularly and systematically applied (p. 4)."

(2) *The preconditions for take-off*. It is a transitional stage where the preconditions for economic take-off are developed as the insights of modern science began to be translated into new production functions in both agriculture and industry. On this stage, not only economic growth is possible, it also become a necessary condition for other purposes, such as private profit, a better life and education for the children. However, a society will be still at a limited pace and mainly characterized by traditional low productivity by the old social structure and values, and by the regionally based political institutions.

(3) *The take-off*. This stage is the interval when the old blocks and resistances to steady growth are overcome, where economic growth becomes the normal condition. Investment and new industries grow rapidly during this stage. The whole process of expansion in the modern sector yields an increase of income and productivity. New technology spread in both industry and agriculture. The revolutionary changes in agriculture are an essential condition for successful take-off.

(4) *Drive to maturity*. It is defined as a long interval of sustained progress as the new regularly growing economy drives to extend modern technology over the whole front of its economic activity. The economy finds its place in the global economy and demonstrates the capacity to move beyond the original industries that powered its take-off, and to absorb and apply efficiently over a wide range of its resources. This is also a stage in which an economy demonstrates that it

has the technological and entrepreneurial skills to produce not everything, but anything it chooses to produce.

(5) *The mass-consumption*. The leading sectors shift towards durable consumer goods and services. As societies achieve maturity, per capita income rise to a point where a larger number of individuals gain a command over consumption which transcend basic food, shelter and clothing. The workforce changes in ways that increase not only the proportion of urban to total population, but also the proportion of the population working in offices or in skilled factory jobs, aware of and anxious to acquire the consumption of a mature economy. Through the political process, societies choose to allocate increased resources to social welfare and security beyond technical maturity. However, for development economists, the urgent drive was to accelerate development- not to wait on what was thought to be a 100-year cycle but rather to see what could be achieved in a decade.

Rostow's contribution has been considered "a classic" in development theories. It stimulated tremendous research on, and development efforts in, developing countries. The vocabularies created by Rostow have become standard language in all subsequent development literature.

Vicious circles-poverty traps and the big push theories

Since early 1940s, the phenomenon of underdevelopment or low level equilibria were modeled in the literature (Myrdal, 1944, 1957, 1968), attempting to explain the complex phenomena presented by the development reality. Due to economic systems negative feedback, poverty tends to be persistent and reinforced between system components, thus prevailing in a sustained way, until it meets some countervailing force. Such phenomena were referred to as vicious circles or poverty traps. The relationship was also considered as "Matthew Effect (Merton, 1968, 1988)." It is named after the Biblical reference:

> For to every one who has will more be given, and he will have abundance; but from him who has not, even what he has will be taken away (Matthew 25, p. 29).

Among the numerous vicious circles modeled in the literature, at least three major ones (Hirschman, 1957; Leibenstein, 1957; Myrdal, 1957; Nurkse, 1953) are relevant to current NHRD idea that have not been mentioned in developing countries in the NHRD literature. On the demand side, low per capita real income causes low effective market demand, which leads to low incentive for capital investment, therefore low productivity. The consequence is again back to low per capita income. On the supply side, low income results in low savings, and leads to low investment potential. The resulting situation again is low productivity and subsequent low per capita income (Ray, 1998). Another vicious circle is between the interlinked factors of poverty, population growth and environmental degradation. Environmental degradation and population growth exacerbate one another in a causal link that reinforce the poverty, in which greater population leads to a worsening environment and a worsening environment leads to more rapid population growth (Cleaver and Schreiber, 1994; Dasgupta, 1995). For the second part of the circle, the greater scarcity of natural resources leads to a higher relative value of children for the purpose of obtaining scarce environmental goods, thus higher fertility rate. Other vicious circles also covered credit market, international trade, etc. Under the numerous vicious circles, developing countries were seen being trapped in poverty and stayed in underdevelopment.

The "rich get richer" phenomenon on the other hand, is a virtuous circle observed in developed countries. The Matthew Effect on this aspect is interpreted as a virtuous circle leads to high-level equilibria. To avoid the world economies under the two types of circles operate and drive the dynamics of divergence in opposite directions, a "critical mass (Stiglitz, 1998, p. 13)" in between the two types of circles is necessary. Such critical mass is the minimum economic forces required to break up the vicious circle and get out of the poverty trap by developing countries. A comprehensive development effort of coordinated action is considered crucial to achieve the critical mass so that the virtuous dynamics can take place and drive to the high level equilibrium.

A classical theory on creating critical mass is Rosenstein-Rodan's (1943) Big Push strategy. With a fictitious country, Rosenstein-Rodan introduced a well-known "Big Push" strategy later considered to be effective for overcoming the vicious circles. The idea was, if several sectors in a nation adopt increasing returns simultaneously, through government-coordinated efforts, it would create a source of demand through spillover effect and make industrialization profitable. Yet, more recent studies found that there was no such thing as government coordination because government itself was part of the systems, the endogenous set of institutions to be explained (see, e.g. Dixit, 1996; and Basu, 1997b, 2000). Over the years, studies on the Big Push theory provided sufficient policy guidance to developing countries and international agencies to implement development strategies (Hoff, 2000; Murphy *et al.*, 1989).

Trickle down hypothesis

Although increased income inequality may raise the issue of social instability and welfare for the poor, it was widely believed among economists that the accumulation of wealth by the rich is good for the poor through the trickle-down or spillover effect (Ray, 1998). The idea is simple, with enough growth and little intervention to correct income inequality, the fruits of economic development will eventually filter or trickle down to the poor, as the demands for what generally unskilled labor can offer are magnified. A frequently cited example in the literature was the US government's spending during the two world wars, which affected the demands for skilled vs. unskilled labor in the economy. An increase in government employees in the labor force was associated with a significant increase in equality in the US (Lindert and Williamson, 1985). Aghion and Bolton (1997) proved mathematically that under imperfect market, the trickle-down hypothesis was indeed attainable in the long run with rooms for government intervention to accelerate the trickle-down process. In development practice, China has adopted a similar policy known as "allowing a portion of people getting rich first" in the early 1980s and proved to be effective in its earlier economic development.

Dual labor market theory

Economists believed that underdevelopment was a structural problem in addition to the systems analyses on the vicious circles. One of the most influential structuralist models that had been dominating development economic thinking was Lewis's (1954) dual economy with unlimited supplies of labor. Lewis started from a premise that developing countries are characterized by two separate and distinct economic sectors, a traditional agrarian sector and a capitalist industrial sector. The agriculture sector is characterized with labor surplus, or disguised unemployment, which has low or zero opportunity cost. The expansion of the industrial sector is nourished by supplies of cheap labor from the agricultural sector. Economic development consists of the reallocation of surplus workers from rural area to industry where they become productive. However, not all rural surplus labor can be absorbed immediately because the scale of the modern sector is limited by the supply of capital. Thus capital accumulation becomes the engine of development.

The dual economy theory of development led Kuznets, the laureate for 1971 Nobel Prize in economics, to discover how an economy that drew more and more people from low-income agriculture into high-income industry would first increase, then decrease the inequality of incomes in the economy (Kuznets, 1955). Lewis' dualism model was well received by policy makers in various countries and international organizations. Many development strategies were formulated and implemented based on the dual economy model. For this and other contributions in economic development, Lewis, together with Schultz, received the 1979 Nobel Prize in economics.

By the turn of the twentieth century, the international development community has reached new consensus that development is a process of transformation of society, of people, of a move from old ways of thinking, old forms of social and economic organization, to new (Stiglitz, 1998). The new consensus provided new rationales for development policies. For example, education is important not just because it increases human capital but because it changes the acceptance of change; it introduces individuals to the scientific method, to ways of thinking that are markedly different from traditional ways of thinking. Trade is important not just because some goods and services can be purchased at a lower price, but because it brings a country into closer contact with others, and through these contacts, there is a change in ways of thinking.

The Harbison-Myers study

To understand why economists first used the concept of human resource development, it is necessary to understand the background of the Harbison and Myers (H-M) study in the early 1960s. Development economics and human capital studies were the twin topics simultaneously pioneered by Schultz, among others, in the 1950s (Schultz, 1961, 1964). On the human capital research front, the pioneering work triggered immense interest among economists. By 1976, there were almost 2,000 studies conducted on human capital (Blaug, 1976a). However, the inquiry was coupled with doubts and debates even from some prominent economists at the time. Among the critiques, Shaffer (1961) noted that "it is (was) generally inadvisable to treat man as human capital," and "economics has (had) little to gain and much to lose by the universal application of the capital concept to man (p. 1026)." In addition to technical difficulties involved in measuring human capital, Shaffer further argued that education should be treated as consumer goods. Others argued that acquired skills that increase future personal earnings had no financial meanings (Wiseman, 1965). In fact, such debate lasted well over a decade. As late as 1976, three years before Schultz received the Nobel Prize, Blaug, a well-regarded economist at the time, still predicted that "the human capital research ... will gradually fade away to be swallowed up by the new theory of signaling ... In time, the screening hypothesis [for a detailed discussion, see Wang and Holton (2005)] will be seen to have marked a turning point in the human investment revolution in economic thought, a turning point to a richer, still more comprehensive view of the sequential lifecycle choices of individuals (Blaug, 1976b; p. 850)."

Given the above background, the H-M study was a timely empirical study that integrated both human capital and development economics theories to development countries' reality. Clearly, the study took human capital theory as a theoretical foundation as presented in a section entitled "The economic analysis of man (pp. 3-11)." Sobel (1978) provided an assessment on the H-M study's role in economics theory building in a comprehensive review of the two economics research fronts:

> Of equal note and importance in these events [human capital research efforts] were the subject matter and analytical changes, which then characterized labor economics. By the end of the decade [the 1950s] that field had been transformed into one primarily dealing with human resources and manpower. That field, formerly largely descriptive and institutionally oriented, was brought back into microeconomic theory and made some notable contributions to its evolution. Perhaps these developments are best illustrated by changes in the emphasis of the Inter-University Project (Harbison, Myers, Dunlop and Kerr) sponsored by the Ford Foundation, which initially had a major focus on the study of labor movements in economic development (p. 281).

Apparently, Sobel's review is consistent with H-M's (1964) own statement that the study is "a joint project of the Industrial Relations Section, Princeton University, and the Industrial Relations Section, Massachusetts Institute of Technology, as part of the Inter-University Study of Labor Problems in Economic Development (p. iii)."

The HRD concept used by H-M study indeed was a continuation of many other earlier development economics studies. For instance, Lewis (1955) pointed out that: "The advantage of economic growth is not that wealth increases but it increases the range of human choice – the case for economic growth is that it gives man greater control over his environment, and thereby increases his freedom – economic growth also gives us freedom to choose greater leisure (pp. 420-421)."

Clearly, the significance of the H-M study was its effort in combining the latest theories in development economics and human capital studies and attempting to develop composite indices, through empirical study, to comprehensively measure the development performance and human development status. Referred to as Harbison-Myers Composite Index of Economic Development, Adelman and Morris (1968) used it as one of 15 economic indicators to empirically measure the economic development potentials for 17 developing countries. Morris (1979) subsequently created Physical Quality of Life Index with three indicators of development: Infant mortality, literacy, and life expectancy conditional on reaching the age of 1. All these efforts became the forerunners of Human Development Index (HDI) used by the United Nations (UN) today (Ray, 1998).

In human capital research, economists often did not distinguish the terms of human capital investment and human resource development. This can be seen in economics literature as late as 1997 (Shah, 1997, p. viv). For instance, Sobel (1978) used the two terms interchangeably; other terms were also used to convey the same idea, such as human investment (p. 279) and investment in man (p. 287). At least one point was clear, that the intention of H-M study was not to define a field called HRD at the time, but pioneer the measurement of development status. Historically, economists have used a number of other terms that are frequently used in today's HRD literature, e.g. on-the-job training. It was first created by Mincer (1958, 1962) and used in a different way from HRD's definition. Responsible HRD scholars have not used such "discovery" to redefine the meaning of on-the-job training currently used in HRD. For a clarification in the common terms used in both economics and HRD, readers are encouraged to refer to Wang and Holton (2005) for detailed discussions.

In summary, examining the H-M study in the historical and economic development context, it is only one step during a long march of human capital and economic development research, and their applications. The research and practices have moved on since the study.

National HRD: review and analysis

First and foremost, based on an outdated study in economic development, current research under the name of NHRD hardly advances our knowledge in economic development, nor in human resource development. As it well-known in development communities as represented by the UN and the World Bank, since the first Human Development Report (HDR) published by UN in 1990, UN has actively promoted and supported each member country to develop HDR national and sub-national report. As a result, many developing countries have published country specific HDRs since early 1990s that including almost all the countries covered in the NHRD literature. A quick search revealed the following sample HDRs: Brazil HDR, 1996, China HDR, 1999 and 2005, Morocco HDR, 1997, 1999 and 2005; Philippines HDR, 1994 and 2000; and South Africa HDR, 2003. Presumably, country specific HDRs would provide most authoritative sources on national history, cultural, and socio-economic contexts and current development status of human development in additional to UN's. However, in spite of repeatedly citing HDRs by UN, none of the country specific articles in the NHRD writings has mentioned or referred to the latest corresponding nations' HDRs thus far.

Moreover, as presented earlier, H-M study was a forerunner of the concept of human development and subsequent HDI adopted by UN since the 1990 HDR. The country typology by H-M has also long been replaced by UN's two country classifications:

(1) *By HDI*, e.g.:
- high HD, including countries with HDI 0.8 and above;
- medium HD, including countries with HDI of 0.5-0.799; and
- low HD, including countries with HDI below 0.5.

(2) *By Gross National Income (GNI)*, e.g.:
- high income, including countries with GNI per capita of $9,076 or more in 2002;
- middle income, including countries with GNI per capita of $736-$9,075; and
- low income, countries with GNI per capita of $735 or less.

Nonetheless, existing country studies on NHRD ignored UN's classification but used H-M's 40-year-old four-level country classification.

Furthermore, some HRD scholars hastily concluded that the "United States is behind most of the rest of the world in acknowledging the value of NHRD. As a result, the USA does not have a clear vision of its national human resource development, and multiple agencies (perhaps as many as 125) overlap in offering uncoordinated aspects of NHRD (Cho and McLean, 2004; p. 391)." Such conclusion was not based on our current knowledge on the USA's workforce development history and reality. It also contradicts to the human capital theory.

The USA has a well-defined national HRD policy and implementation system, as well as a supportive legislative system. The Training within Industry (TWI) during WWII may be considered a historical case (Ruona, 2001). Since then, the US has implemented Manpower Development and Training Act (MDTA) in the 1960s, the Comprehensive Employment and Training Act (CETA) in the 1970s, and the Job Training Partnership Act (JTPA) in the 1980s, not to mention numerous other programs under the names of school-to-work or welfare-to-work (Crawford, 1993), which should be reasonably considered in the domain of current NHRD umbrella. The 1990s has witnessed US National HRD policy entering a new stage as represented by the Workforce Development Act (WIA; US Public Law 105-202, 1998). More recently, the WIA was expanded to the American Competitiveness in the Twenty-first Century Act of 2000 (ACWIA, 2000) specifically for technical skills development. Therefore, an opposite conclusion should follow, namely, U.S. national HRD policies possesses almost all the 21 "attributes of excellent NHRD" discussed in Cho and McLean (2004).

In current literature on NHRD, it is not clear:

- whether NHRD has currently been formulated in the countries covered, and some HRD professionals attempt to impose a paradigm to fit in what has been implementing in the developing countries; or
- whether the literature are to investigate current HRD policy practice and theorize the similarity and differences for proposing policy recommendations.

Except for UN, current writings on NHRD hardly noted other international forces in promoting economic and human development, assuming HD is a legitimate research domain of HRD. The fact was, based on development economics, UN, together with three other major sister organizations, World Bank, International Monetary Fund, and World Trade Organization, has coordinated waves after waves of international development initiatives. Not to mention many regional non-government organizations (NGOs) such as Asian Development Bank (ADB), Asian Pacific Development Center (APDC) and the like in all parts of the world.

In the individual developing countries, additional to government-coordinated efforts as represented by the country specific HDRs, professionals from many other disciplines have been conducting HRD related research and practices for many years. Some approaches familiar to today's HRD professionals have already been proposed and implemented in early 1980s. For example, realizing the multidimensionality of poverty, development practitioners proposed participation and empowerment approach to transform the poor to become agents rather than passive recipients of benefits in developing countries (Cohen and Uphoff, 1980; Goulet, 1989; Weinberger, 2000). Streeten (2002) conducted an overall assessment on the approaches and proposed policy recommendations for effective implementation. In a study of the Singapore skills development system, Kuruvilla *et al.* (2002) developed a framework to assess the national skills development effort. In another more recent study funded by Canadian International Development Agency (CIDA), Liu and Wall (2005), scholars in the field of tourism, studied HRD in Chinese tourism industry and proposed policy recommendations. Obviously, the paradigm described by the NHRD literature had been in full swing long before HRD professionals realized the importance of the issue.

To address the second issue, a brief review of the key terms used in the five NHRD models may be helpful. The terms read: "policy and strategy", "role of central government", "planning of government", "economic development", "national development plan", "national political, social, and economic skill needs", "planning", "economic needs", "tax incentives", etc. (Cho and McLean, 2004, pp. 383-385; Lynham and Cunningham, 2006, p. 123). All these keywords clearly indicated that NHRD, in essence, was about HRD policy studies. This conclusion is consistent with the term "HRD as national policy" sometimes used interchangeably with NHRD (McLean *et al.*, 2004). It should be noted that, at a national level it is the roles of national policies and the policy makers, as well as the outcomes of the policy implementation that "develop and unleash human expertise for national economic performance, political and social development, growth, and well-being …" (Lynham and Cunningham, 2006, p. 119). HRD's role should be assisting the formulation and implementation of HRD policy, assessing the outcome of policy implementation, and proposing policy recommendations, through research and HRD related practices.

Implications and future directions for research

The above analysis does not imply that HRD as a field is not important in the process of economic development. However, to play a role in developing countries' economic or human resource development, HRD professionals need to understand both foundational economic theory and country specific contexts. As HRD practitioners or analysts, HRD professionals may make a significant contribution.

Although contextual background is specific among different countries, HRD researchers need to focus on development commonalities to identify commonly applicable approaches in HRD policies through research. The theories in development economics reviewed provided examples in such theory building process. In other words, to analyze HRD issues in developing countries, HRD scholars not only need to know the development stage of a specific country under study, but also need to understand the causes and persistence of various vicious circles that may hinder HRD policies and initiatives. Economic analysis already demonstrated that among all variables influencing economic development, such as physical capital, human capital, financial system, trade, and institutional structure, any single variable or system component alone will not be able to create the needed "critical mass". This implies that HRD profession must work together with other development related professions to form joint and integrated force for development. Overemphasizing HRD's role by stretching its boundary beyond the accepted domain in the development long march may actually de-service the field of HRD and the development practice.

Moreover, the dual economy model is particularly important to HRD policy studies in developing countries. Developing human resources in rural area is completely different from doing so in modern sector due to different skills and competencies requirements. HRD scholars may develop different strategies through research to prepare workforce skills in the two different sectors. That may include:

- developing skills that may create rural entrepreneurs and niche industries;
- prepare rural workforce to be absorbed into modern sector with necessary skills, which may include not only basic literacy training, but also skills necessary for modern sectors, such as service skills;
- study existing modern sector's HRD issues such as those presented by Wang and Wang (2006a, b); and
- study policies and implementation processes, and the outcomes, and research on effective strategies to create the critical mass.

Conclusion

By reviewing major foundational theories in development economics, this article demonstrated the importance of HRD's foundational theories, economic and system theories. The results pointed to the following conclusions:

- current literature in NHRD has not advanced our knowledge in economic development, human development, and human resource development under different cultural contexts;
- HRD research at national level should be positioned as HRD policy studies and focus on the comparison of commonalities and differences in national HRD policies for the purpose of proposing research-based policy recommendations;
- any conclusion on national HRD policy for a particular country must be based on research evidence while considering the historical and socioeconomic contexts of the country; and
- the domain of HRD research and practice should not be stretched to human development.

In summary, with a right mindset and a right position in the overall development community, HRD scholars and practitioners can certainly play a significant role in accelerating the development process through policy analysis. Without being grounded firmly in theoretical foundations of HRD, current research in NHRD is likely to lead to a fruitless result, and may be, at best, considered "intellectual curiosity" as Schultz commented on some earlier development in human capital studies (Schultz, 1981, p. 4).

References

Adelman, I. (1974), "On the state of development economics", *Journal of Development Economics*, Vol. 1, pp. 3-5.

Adelman, I. and Morris, C.T. (1968), "Performance criteria for evaluating economic development potential: an operational approach", *Quarterly Journal of Economics*, Vol. 82 No. 2, pp. 260-80.

Aghion, P. and Bolton, P. (1997), "A theory of trickle-down growth and development", *Review of Economic Studies*, Vol. 64, pp. 151-72.

Basu, K. (1997a), *Analytical Development Economics: The Less Developed Economy Revisited*, The MIT Press, Cambridge, MA.

Basu, K. (1997b), "On misunderstanding government: an analysis of the art of policy advice", *Economics and Politics*, Vol. 9 No. 3, pp. 231-50.

Basu, K. (2000), *The Social and Political Foundations of Economics: A Prelude to Political Economy*, Oxford University Press, Oxford.

Blaug, M. (1976a), *The Economics of Education: An Annotated Bibliography*, 3rd ed., Pergamon, Oxford.

Blaug, M. (1976b), "The empirical status of human capital theory: a slightly jaundiced survey", *Journal of Economic Literature*, Vol. 14 No. 3, pp. 827-55.

Cho, E. and McLean, G.N. (2004), "What we discovered about NHRD and what it means for HRD?", *Advances in Developing Human Resources*, Vol. 6 No. 3, pp. 382-93.

Cleaver, K.M. and Schreiber, G.A. (1994), *Reversing the Spiral: The Population, Agriculture and Environment Nexus in Sub-Saharan Africa (and Supplement)*, World Bank, Washington, DC.

Cohen, J.M. and Uphoff, N.T. (1980), "Participation's place in rural development: seeking clarity through specificity", *World Development*, Vol. 8 No. 3, pp. 215-35.

Crawford, C.C. (1993), *Multiple employment Programs, National Employment Training Strategy Needed. Testimony before the Subcommittee on Education, Labor, and Health and Human Services Committee on Appropriations*, US General Accounting Office, United States Senate, Washington, DC.

Dasgupta, P. (1995), "Population, poverty, and the local environment", *Scientific America*, Vol. 272 No. 2, pp. 26-31.

Dixit, A.K. (1996), *The Making of Economic Policy: A Transaction Cost Politics Perspective*, MIT Press, Cambridge, MA.

Ghatak, S. (1995), *Introduction to Development Economics*, 3rd ed., Routledge, London.

Goulet, D. (1989), "Participation in development: new avenues", *World Development*, Vol. 17 No. 2, pp. 165-78.

Harbison, F. and Myers, C.A. (1964), *Education, Manpower, and Economic Growth: Strategies of Human Resource Development*, McGraw-Hill, New York, NY.

Hirschman, A.O. (1957), *The Strategy of Economic Development*, Yale University Press, New Haven, CT.

Hoff, K. (2000), *Beyond Rosenstein-Rodan: The Modern Theory of Coordination Problems in Development*, World Bank, Washington, DC, *Proceedings of the Annual World Bank Conference on Development Economics, 2000 (Supplement to the World Bank Economic Review)*, pp. 145-88.

Kuruvilla, S., Erickson, C.L. and Hwang, A. (2002), "An assessment of the Singapore skills development system: does it constitute a viable model for other developing countries?", *World Development*, Vol. 30 No. 8, pp. 1461-76.

Kuznets, S. (1955), "Economic growth and income inequality", *American Economic Review*, Vol. 45, pp. 1-28.

Leibenstein, H. (1957), *Economic Backwardness and Economic Growth*, Wiley, New York, NY.

Lewis, W.A. (1954), "Economic development with unlimited supplies of labor", *The Manchester School of Economic and Social Studies*, Vol. 22 No. 2, pp. 139-91.

Lewis, W.A. (1955), *The Theory of Economic Growth*, Irwin, Homewood, IL.

Lindert, P.H. and Williamson, J.G. (1985), "Growth, equality, and history", *Explorations in Economic History*, Vol. 22, pp. 341-77.

Liu, S. and Wall, G. (2005), "Human resource development in China", *Annals of Tourism Research*, Vol. 32 No. 3, pp. 689-710.

Lucus, R.E. (1988), "On the mechanics of economic development", *Journal of Monetary Economics*, Vol. 22, pp. 3-42.

Lynham, S.A. and Cunningham, P.W. (2006), "National human resource development in transitioning societies in the developing world: concept and challenges", *Advances in Developing Human Resources*, Vol. 8 No. 1, pp. 116-35.

McLean, G.N. (2006), "National human resource development: a focused study in transitioning societies in the developing world", *Advances in Developing Human Resources*, Vol. 8 No. 1, pp. 3-11.

McLean, G.N., Osman-Gani, A.M. and Cho, E. (2004), "Human resource development as national policy", *Advances in Developing Human Resources*, Vol. 6 No. 3.

Merton, R.K. (1968), "The Matthew effect in science", *Science*, Vol. 159 No. 3810, pp. 56-63.

Merton, R.K. (1988), *The Matthew Effect in Science*, University of Chicago Press, Chicago, IL.

Mincer, J. (1958), "Investment in human capital and personal income distribution", *Journal of Political Economy*, Vol. 66, pp. 281-302.

Mincer, J. (1962), "On-the-job training: costs, returns, and some implications", in Shultz, T.W. (Ed.), *Investment in Human Beings*, *Journal of Political Economy*, Vol. 70 Supplement, pp. 50-79.

Morris, D.M. (1979), *Measuring the Condition of the World's Poor: The Physical Quality of Life Index (For the Overseas Development Council)*, Pergamon Press, Elmsford, NY.

Murphy, K.M., Shleifer, A. and Vishny, R.W. (1989), "Industrialization and the big push", *Journal of Political Economy*, Vol. 97 No. 5, pp. 1003-26.

Myrdal, G. (1944), *An American Dilemma: The Negro Problem and American Democracy*, Harper & Row, New York, NY.

Myrdal, G. (1957), *Economic Theory and Underdeveloped Regions*, Duckworth, London.

Myrdal, G. (1968), *Asian Drama: An Inquiry into the Poverty of Nations*, Pantheon, New York, NY.

Nurkse, R. (1953), *Problems of Capital Formation in Underdeveloped Countries*, Oxford University Press, Oxford.

Ray, D. (1998), *Development Economics*, Princeton University Press, Princeton, NJ.

Rosenstein-Rodan, P. (1943), "Problems of industrialization of eastern and southeastern Europe", *Economic Journal*, Vol. 53, June-September, pp. 202-11.

Rostow, W.W. (1959), "The stages of economic growth", *Economic History Review*, Vol. 12 No. 1, pp. 1-16.

Rostow, W.W. (1971), *The Stages of Economic Growth: A Non-communist Manifesto*, 2nd ed., Cambridge University Press, London.

Rostow, W.W. (1990), *The Stages of Economic Growth: A Non-communist Manifesto*, 3rd ed., Cambridge University Press, London.

Ruona, W.E.A. (2001), "The foundational impact of the Training within Industry Project on the human resource development profession", *Advances in Developing Human Resources*, Vol. 3 No. 2, pp. 119-26.

Schultz, T.W. (1961), "Investment in human capital", *American Economic Review*, Vol. 51 No. 1, pp. 1-17.

Schultz, T.W. (1964), *Transformation of Traditional Agriculture*, Yale University Press, New Haven, CT.

Schultz, T.W. (1981), *Investing in People: The Economics of Population Quality*, University of California Press, Berkeley, CA.

Shaffer, H.G. (1961), "Investment in human capital: comment", *American Economic Review*, Vol. 51 No. 4, pp. 1026-35.

Shah, K.R. (1997), *Essays on Economics of Human Resources*, Spellbound Publications, Rohtak.

Sobel, I. (1978), "The human capital revolution in economic development: its current history and status", *Comparative Education Review*, Vol. 22 No. 2, pp. 278-308.

Stiglitz, J. (1998), "More instruments and broader goals: moving toward the post-Washington consensus", Annual Lectures No.. 2, World Institute for Development Economics Research, Helsinki.

Streeten, P. (2002), "Empowerment, participation, and the poor", background paper for HDR 2002, United Nations, New York, NY.

Wang, G.G. and Holton, E. (2005), "Neoclassical and institutional economics as foundations of human resource development", *Human Resource Development Review*, Vol. 4 No. 1, pp. 86-108.

Wang, J. and Wang, G.G. (2006a), "Exploring National Human Resource Development: a case of China", *Human Resource Development Review*, Vol. 5 No. 2, pp. 176-201.

Wang, J. and Wang, G.G. (2006b), "Participation in management training: a case of China in the transitioning context", *Human Resource Development Quarterly*, Vol. 17 No. 4, pp. 443-73.

Weinberger, K. (2000), *Women's Participation: An Economic Analysis in Rural Chad and Pakistan*, Peter Lang Europäischer Verlag der Wissenschaften, Frankfurt am Main.

Wiseman, J. (1965), "Cost-benefit analysis in education (part 2)", *Southern Economic Journal*, Vol. 32, pp. 1-12.

Further reading

Filmer, D. and Pritchett, L. (1996), *Environmental Degradation and the Demand for Children: Searching for the Vicious Circle*, World Bank, Washington, DC.

Paprock, K.E. (2006), "National human resource development in transitioning societies in the developing world: introductory overview", *Advances in Developing Human Resources*, Vol. 8 No. 1, pp. 12-27.

Schultz, T.W. (1963), *The Economic Value of Education*, Columbia University Press, New York, NY.

About the author

Greg G. Wang is Associate Professor of HRD at College of Business and Technology, the University of Texas at Tyler. His research focus is on economic foundation of HRD, HRD outcome measurement, international HRD, and theory building research. With extensive experience in corporate HRD, he was also involved in economic development and poverty alleviation in developing countries for a number of projects sponsored by the World Bank in the 1980s. He also conducted research projects at the Developing Economy Division, Economic Research Services, The US Department of Agriculture in the early 1990s. Greg G. Wang can be contacted at: wanggreg@aol.com