

International Marketing Standardization A Meta-Analytic Estimation of Its Antecedents and Consequences

Qun Tan · Carlos M. P. Sousa

Abstract:

- Throughout the past four decades, researchers have examined several antecedents and consequences of international marketing program standardization. However, the findings reported in the literature are too fragmented to yield clear insights. To address this issue, the authors conduct a meta-analysis to quantitatively synthesize and analyze the empirical findings on antecedents and consequences of international marketing program standardization.
- The empirical results reported in this study have been integrated from 110 independent samples published in 108 articles. Multivariate analysis is used to examine the antecedents of international marketing program standardization strategy as well as the interdependence between the four elements of the marketing-mix. In addition, meta-regression analyses and subgroup analyses are performed to test potential moderating effects of performance measurement characteristics on marketing standardization-performance relationship.
- On the basis of the results, the authors discuss the implications of their findings and provide directions for further research.

Keywords: Meta-Analysis · International marketing program standardization · International performance · Path dependence theory

Received: 24.03.2012 / **Revised:** 06.12.2012 / **Accepted:** 17.12.2012 / **Published online:** 09.03.2013
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Introduction

The trend toward globalization of markets is likely to become increasingly important in the 21st century. As a consequence, in today's globalized world, the domestic economy is dependent on external markets to grow and prosper. This has made firms' international activities ever more important to the economic development of nations, and as a catalyst for significant growth opportunities for firms. In this context, the issue relating to the development of appropriate international marketing strategies that allow for successful competition in foreign markets is particularly relevant. Whether firms should standardize their marketing programs or adapt their strategies to the characteristics of the foreign market has been a topic of great importance for managers and researchers.

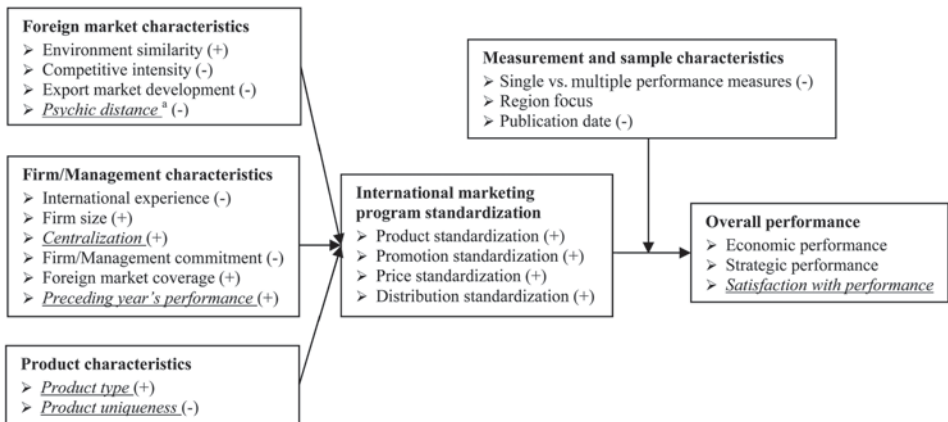
Throughout the past four decades, researchers have examined several antecedents and consequences of international marketing program standardization. International marketing program standardization refers the use of common products, price, distribution, and promotion programs across national boundaries (Jain 1989). However, empirical studies investigating international marketing program standardization have produced results that vary considerably in terms of statistical significance, direction, and magnitude. These conflicting results create difficulties for academic researchers and managers in their attempts to develop theory and management practice in the field. Indeed, the disparate findings suggest the need for a meta-analysis to provide both a systematic review and a quantitative integration of the relevant literature. A meta-analysis can provide insights into these inconsistencies by identifying measurement and sample characteristics as well as by testing the generalizability of the results (Brown and Peterson 1993).

Previous efforts to consolidate research findings in the international marketing program standardization literature have mainly been qualitative (e.g., Birnik and Bowman 2007), are narrowly focused on the consequences of marketing standardization (e.g., Shoham 2003) or used less sophisticated approaches such as the vote-counting method (e.g., Theodosiou and Leonidou 2003) and *p*-value combinations (e.g., Leonidou et al. 2002). In addition, previous review studies did not quantitatively test the possible impacts of interdependence between elements of the marketing-mix standardization on international performance, nor did they examine the impact of possible moderators in an effort to understand this relationship. Our aim in this study is to advance understanding on the topic of international marketing program standardization by addressing these limitations and issues that have been ignored in previous review articles. To accomplish this objective, we conduct a meta-analysis of the international marketing program standardization literature. First, we present a theoretical framework to guide the meta-analysis. Second, we discuss the development of the database for the meta-analysis. Third, we use the meta-analysis to provide a quantitative summary that includes the mean values and range of effects for the relationship that involve international marketing program standardization/adaptation. Fourth, we use multivariate analyses to examine the antecedents of international marketing program standardization strategy. Fifth, we concentrate on the marketing-mix standardization-international performance relationship and conduct a detailed analysis that includes: (1) Multivariate analysis to examine the marketing-mix standardization and international performance relationship by considering the interdependent effects between the four elements of the marketing-mix, and (2) meta-regression analyses

and subgroup analyses to test potential moderating effects of performance measurement characteristics on marketing standardization-performance relationship. We conclude the meta-analysis by discussing the implications of our findings and providing directions for further research. The empirical results reported in this study have been integrated from 110 independent samples published in 108 articles. The insights that are generated through this quantitative synthesis of the literature are likely to be valued by academic researchers and managers whose research interests and job responsibility focus on the export activities of the firm.

A Proposed Framework of International Marketing Program Standardization

We developed the conceptual framework displayed in Fig. 1 on the basis of the empirical studies and a few review studies found in the literature on international marketing program standardization/adaptation (e.g., Ryans et al. 2003; Shoham 2003; Theodosiou and Leonidou 2003; Waheeduzzaman and Dube 2004). This framework is based on the ESP (Environment-Strategy-Performance) paradigm (Child 1972; Zou and Stan 1998). Consequently, a firm’s strategies are subject to its internal and external environment, and focused on allocating resources available to reach a position to match its environment, thereby achieving plausible performances. Specifically, this framework describes the components of international marketing program standardization strategy and their relationships with 12 antecedent factors (including foreign market characteristics, firm/management characteristics, and product characteristics), and international performance (including measures on three dimensions: Financial performance, strategic performance, and satisfaction with performance). It also presents the possible moderators (including measurement and sample characteristics) influencing the international marketing program standardization-performance relationships. This framework is appropriate for this



^a The italic, underlined constructs were excluded in the subsequent meta-analytical model due to the lack of adequate information.

Fig. 1: Conceptual framework for meta-analysis



study based on our research purpose, i.e. to review both antecedents and consequences of international marketing program standardization. In addition, it is compatible with the idea of resource-based view and the fit theory, which are also frequently adopted in the reviewed articles.

Antecedents of International Marketing Program Standardization

Many previous studies (e.g., Cavusgil and Zou 1994; Myers and Cavusgil 1996; Zou and Stan 1998) classified the determinants of export marketing strategy into internal factors including firm and product characteristics, and external factors including industry and export market characteristics. To be consistent with previous research we adopted the same classification.

Foreign Market Characteristics

Foreign market characteristics refer to the macro-environment (e.g., political/economic/legal environment, etc.) and the micro-environment (e.g., competitive intensity) in foreign markets that can exert an impact upon firms' marketing strategy (Sousa et al. 2008; Zou and Stan 1998). In this study, environmental similarity, competitive intensity, export market coverage, and psychic distance are included in this category. *Environmental similarity* includes the similarity of economic/political/legal conditions, marketing infrastructure, consumer conditions, and competitive conditions, among others, between home and target markets. The similar environments indicate a homogenized demand in home and host markets, thus increasing the feasibility of a standardized marketing strategy (Jain 1989). Almost all the empirical studies also validate the notion that environmental similarity positively influences the adoption of a standardized marketing strategy (e.g., Chung 2009; Jain 1989; Sousa and Bradley 2009). *Competitive intensity*, the degree of competition firms face in foreign markets (Cui and Lui 2005; Grewal and Tansuhaj 2001), is generally accepted to have a negative impact on the standardized marketing strategy, due to the great pressure from competitors to tailor firms' marketing strategy to export market characteristics (Cui and Lui 2005). The majority of the reviewed studies confirm a negative influence of competitive intensity on marketing program standardization (e.g., Lages et al. 2008). *Export market development* refers to the overall standard of living conditions represented by economic development (developing/developed) (Lee and Griffith 2004), and education level (Lages and Montgomery 2004). It is posited to negatively influence the adoption of a standardized marketing strategy, because of the more intensive competition and higher degree of personalized demands in more developed markets (Lages and Montgomery 2004). This negative impact is empirically validated except for one study by Vrontis et al. (2009). *Psychic distance* refers to an individual's perception of differences between the home country and the foreign country (Sousa and Bradley 2006). It is expected that psychic distance negatively affects the degree of marketing standardization, as managers are more likely to adapt their marketing strategy to the characteristics of the foreign markets when they perceive the differences between the home and foreign market to be high.

Firm/Management Characteristics

Firm/management characteristics refer to relevant assets and skills of a firm which may bring firms competitive advantages (Cavusgil and Zou 1994). In this study, international experience, firm size, centralization, management commitment, foreign market coverage, and the preceding year's performance are included in this category. Firms/managers with more *international experience* usually prefer an adapted marketing strategy, as they have better knowledge of foreign markets (Wong and Merrilees 2008) and are more motivated to consider different strategies (Lages et al. 2008). However, empirical studies disclose mixed influences of international experience on international marketing program standardization (e.g., Nakos et al. 1998; Wong and Merrilees 2008). *Firm size* is generally postulated to have a positive relationship with the degree of marketing standardization, because larger firms can take greater advantage of economies-of-scale, and the less flexible structures also prevent large firms from effective marketing adaptation (Schilke et al. 2009). *Centralization* refers to the extent to which headquarters control subsidiaries' management in terms of strategic decision-making. This construct is generally supported as being positively related to the marketing standardization strategy, as the decision-makers at the headquarters may prefer a standardized strategy to an adapted strategy for better control over the subsidiaries' products/services (e.g., Chung 2009; Melewar and Saunders 1998). With a few exceptions (e.g., Myers 1999; Özsoymer and Simonin 2004), all the empirical studies confirm a positive impact of centralization on each component of international marketing program standardization. *Firm/management commitment*, referring to the extent to which firms' managements are willing to allocate resources to exporting activities (Lages et al. 2008; Navarro et al. 2010), tends to negatively influence the adoption of a standardized marketing strategy, as both the attitudinal support and the support from more allocated resources will motivate managers to adapt their marketing strategies (Lages and Montgomery 2004). However, mixed results are found in empirical studies for each component of marketing program standardization (e.g., Lages 2001; Larimo and Kontkanen 2008). *Foreign market coverage*, referring to the number of foreign markets, is expected to be positively related with a standardized marketing strategy, due to the great pressure brought by gray markets (Sousa et al. 2008) and the attractiveness of economies of scale (Shoham 1996), and scope (Schilke et al. 2009). *Preceding year's performance*, although ignored by most of the reviewed studies, should also have positive influence on the degree of standardization because good performance in the preceding year will motivate managers to adopt a relatively less effortful strategy of standardization (Lages and Montgomery 2004). However, this proposed relationship has received little attention by researchers.

Product Characteristics

Product characteristics include product cost, product type, unique/innovative features of the product, and product positioning, among others (Cavusgil and Zou 1994; Myers and Cavusgil 1996). Among the empirical studies, only product type and uniqueness of product have attracted some attention. *Product type*, generally classified into consumer products and industrial products, is postulated to have some impact on international marketing

program standardization. Most studies indicate that a standardized marketing strategy is more likely to be implemented for industrial goods than for consumer goods (Cavusgil et al. 1993; Johnson and Arunthanes 1995), as less adaptation is required for industrial products than consumer products (Lee 2010). However, empirical results report conflicting influences of product type on international marketing program standardization (e.g., Cavusgil et al. 1993; Lee and Griffith 2004). *Product uniqueness*, defined as the extent to which products satisfy unique needs or serve unique purposes (Cavusgil et al. 1993), should negatively influence the degree of marketing standardization, as all the marketing strategies need to be designed to remain consistent with the unique needs in foreign markets (Cavusgil and Zou 1994). Mixed results are found regarding the impacts of product uniqueness on international marketing program standardization (e.g., Cavusgil and Zou 1994; Cavusgil et al. 1993).

Consequences of International Marketing Program Standardization

With a few exceptions (e.g., Shoham et al. 2008), all the reviewed studies use international performance as the consequence of international marketing program standardization. In general, a standardized international marketing program strategy has potential advantages such as economies-of-scale, consistent worldwide image, decrease of the friction between headquarters and subsidiaries/local representatives (Shoham 2003), cost savings, decision simplification, and operation efficiency (Waheeduzzaman and Dube 2004). Therefore, marketing standardization is posited to have a positive impact upon international performance, including profitability (Özsomer and Simonin 2004), sales volume (Melewar and Saunders 1998), and sales growth (Chung 2009), among others. However, among the many empirical studies, for each element of marketing program standardization, the influences on international performance are mixed.

Method/Database Development

Data Collection

The purpose of this study is to synthesize extant research on international marketing program standardization/adaptation by conducting a meta-analysis. Therefore, for a study to be included, three criteria had to be met as follows: (1) That it investigate firms engaged in multinational markets; (2) that it study marketing standardization/adaptation either as an antecedent or consequence; and (3) that it have an empirical nature, reporting either correlation coefficients or indicators that could be converted to correlation coefficients (e.g., Students' t , Chi-square, F-ratio with one degree of freedom, p -values for group comparisons, and standardized beta coefficients β ; see Peterson and Brown 2005; Rosenthal 1994).

Eligible articles were identified using a combination of computerized and manual bibliographic search methods, and were taken from the journals/conference proceedings in international business and marketing. This approach is consistent with the Hunter and Schmidt (1990) argument that meta-analysis should include all the available data regard-

less of the 'quality' of data (see also Dalton and Dalton 2005). Using keywords such as *marketing (product/promotion/price/distribution) standardization (adaptation/modification/localization/customization)*, we searched the EBSCO, ProQuest, JSTOR, Emerald, ScienceDirect (Elsevier) and Wilson Business databases for eligible articles published before January 2011. Then we conducted backward and forward citation chasing based on the reference lists obtained from the first step. We also manually searched library archives for relevant articles. Finally, we posted requests for correlation matrices which are not provided in some empirical studies. However, very few correlation matrices were obtained, as many scholars reported that they did not hold the data anymore. After excluding duplicate studies (see Wood 2008 for the procedures), a total of 655 effects from 110 independent samples reported in 108 studies were obtained. Publication outlets of the primary studies include around 30 journals such as the Journal of Marketing, Journal of International Marketing, International Marketing Review, and Journal of International Business Studies, among others (A list of the studies included in the meta-analysis can be requested).

Coding of Studies

In terms of the coding process, by following Weber (1990) eight steps, and Stock (1994) suggestions, we developed a codebook for coding items regarding study subjects (the components of product/promotion/price/distribution standardization are consistent with those of Theodosiou and Leonidou (2003), effect size (i.e., correlation coefficient in this paper), sample size, reliability, research setting, methodology, and measurement, among others. To reduce possible coding error, three steps were taken: First, three academics discussed and reached agreement on the written codebook; next, two academics from different disciplines (one from marketing and one from management) conducted the coding independently; and lastly, the discrepancy was discussed with another academic to finalize the coding. As the codebook was clearly developed and little room was left for coders' judgement, the average inter-coder agreement across all the items was very high (95%). In addition, by including academics from two different disciplines, we are more confident about the coding reliability. To avoid confusion about the sign of correlations obtained by using both international marketing-mix standardization and adaptation, we coded the primary studies so that only the standardization of the international marketing-mix is used throughout the paper. Therefore, a positive correlation coefficient denotes that there is a positive relationship between international marketing-mix standardization and the other construct of interest. The correlation coefficients r s were mainly obtained from correlation matrices. Some r s are transformed from Students' t , Chi-square, F-ratio with one degree of freedom, and p -values for group comparisons by using the formula in Rosenthal (1994). Other r s were from β coefficients of linear regression models by using the formula $r = 0.98\beta \pm 0.05\lambda$ ($\lambda = 1$ for $\beta \geq 0$, $\lambda = 0$ for $\beta < 0$) when β resides in the interval ± 0.50 (for details see Peterson and Brown 2005). Notably, we checked the above formula with articles where both r and β are available, and the reliability exceeds 0.9. In addition, we used this formula only when the requests for original correlation coefficients from the authors failed. If a study contained multiple measures of a construct, to improve the precision of the meta-analysis, these measures were combined to compute a composite correlation and composite reliability using the method described by Hunter and Schmidt (1990).

Meta-Analytical Analysis Procedures

We followed the same procedures employed by Kirca et al. (2005), which was a combined method of Hunter and Schmidt (1990) and Hedges and Olkin (1985). As the goal was to understand construct-level relationships instead of predicting actual observed scores, we first corrected correlation coefficients obtained from each primary study for measurement error (Hunter and Schmidt 1990). Specifically, we divided the correlation coefficient by the product of the square root of the reliabilities of the two constructs. When the reliability of a construct was not reported, we used the mean reliability of all the reliabilities available in that study. An estimated reliability of 0.8 was used when not one single reliability was reported in that study (Dalton and Dalton 2005). We then transformed the reliability-corrected correlations into Fisher's z -coefficients. Subsequently, we calculated the weighted average z -coefficients. The weight was the inverse of each effect size's variance ($N-3$), which tends to assign more weight to studies with better precision. Finally, the weighted average z -coefficients were retransformed to correlation coefficients (Hedges and Olkin 1985; Kirca et al. 2005). To guarantee the correctness of the computation process, we conducted the meta-analysis based on the reliability-corrected correlation coefficients r_s and sample sizes, by using the software CMA2 (*Comprehensive Meta Analysis 2*) recommended by Borenstein et al. (2009).

Several other judgement calls involved in this meta-analysis are as follows: (1) A random-effects model, instead of a fixed-effect model, was chosen for the analysis. A random-effects model is appropriate when the primary studies are performed independently by different researchers and the samples are drawn from different populations (Borenstein et al. 2009), which is the case for our study. In addition, a random-effects method is typically recommended because it does not suffer from severe type I bias in significance tests for mean effect sizes, while a fixed-effect model does (Hunter and Schmidt 2000); (2) We did not correct for range restrictions, as the intentional "selectivity" in the sample (Dalton and Dalton 2005) did not exist in the majority of the primary studies; (3) We did not exclude "outliers" with extreme-values as they were not necessarily poor studies and may be attributed to sampling difference (Dalton and Dalton 2005). Instead, we followed the suggestions by Dalton and Dalton (2005) to run the analysis with and without outliers to make the final decision. The results show that there is no significant difference between the two; (4) The sample sizes used for subsequent path analyses were the harmonic means of the sample sizes for correlations involved, as the use of a harmonic mean is more conservative, and yields precise estimates of standard errors of parameter estimates (Viswesvaran and Ones 1995); (5) In terms of the heterogeneity test, we reported τ^2 , standard error of τ^2 , and p -values for the Q statistic to show both the magnitude and the uncertainty of effect sizes' heterogeneity (Aguinis and Gottfredson 2010; Aguinis et al. 2011; Borenstein et al. 2009); (6) File drawer problems were addressed by systematically searching for conference proceedings (e.g., AMA, AIB EMAC, AOM, CIMaR), then browsing Google scholar for possible unpublished papers. In addition, requests were made for unpublished articles from scholars in this area. Despite the above efforts, only two additional papers were obtained. We also conducted subsequent tests using the 'random-random effects trim and fill model' (for details see Duval and Tweedie 2000; Peters et al. 2007) for publication bias to show the modified estimate of the summary effect sizes.

Antecedents and Consequences: Quantitative Summary of Bivariate Relationships

Table 1 presents the summary bivariate correlations and other meta-analytical statistics for the relationships between international standardization and its antecedents and consequences. In total, 304 and 123 effect sizes for the antecedents and consequences of international marketing program standardization were reached, respectively.

Overall, the findings on antecedents and consequences of international marketing program standardization are consistent with the expectations in previous research, although some of the correlations are non-significant. To present affirmative heterogeneity indices, we reported in Table 1 both the magnitude and the uncertainty of heterogeneity. In terms of the magnitude of effect sizes' heterogeneity τ^2 , which is defined as the variance of the true effect sizes across studies (Borenstein et al. 2009), this ranges from 0.000 to 0.225 with the standard error ranging from 0.002 to 0.324. The uncertainty of the heterogeneity in this study is represented by the p -value for Q (a Chi-square statistic indicating whether all the studies share a common effect size). Forty (40) out of the 54 Chi-square tests record significant p -values, which indicates that most of the apparent heterogeneity is genuine. This also verifies our previous choice of random-effects meta-analytical model as being appropriate. When it comes to the publication bias test, the results of 'random-random effects trim and fill model' tests suggest that, with a few exceptions, no studies are missing for all the relationships reviewed. Therefore, almost all the trim-and-fill modified estimates for correlation coefficients r_s remain unchanged.

Antecedents of International Marketing Program Standardization: Multivariate Assessment

One advantage of conducting a meta-analysis is that it allows researchers to evaluate simultaneously the effects of variables that may only have been separately studied in individual studies (Kirca et al. 2005). Table 2 reports the correlation matrices we used for the path model analysis of international marketing program standardization and its antecedents. The VIFs (Variance Inflation Factor) range from 1.057 to 1.328 (see Table 2), indicating that multi-collinearity is not an issue in our study. Notably, psychic distance, centralization, the preceding year's performance and product type were excluded from this model as these constructs did not have multiple study effects relating them to every other construct in the model (Peterson and Brown 2005).

Considering potential correlations among the error terms of dependent variables (i.e., product, promotion, price, and distribution standardization) across equations, we conduct the SUR (Seemingly Unrelated Regression) analysis using the approach proposed by Beasley (2008). We also compared the two models with and without the correlated errors. The results suggest that the SUR model is preferable. The results are summarized in Table 3. The fitting index shows that the data fit the hypothesized model quite well (Chi-square $[\chi^2]=0.001$, degree of freedom [d.f.]=1, $p>0.05$; root mean square error of approximation [RMSEA]=0.000; goodness-of-fit index [GFI]=1.000; comparative fit index [CFI]=1.000). The majority of the regression beta weights are significant, which indicates affirmative effects of environmental similarity, competitive intensity, interna-

Table 1: Overview of antecedents and consequences of marketing standardization

Constructs	Product standardization				Corrected Mean r^2	95% Interval of r	p -Value for Q^2	τ^2	Standard Error of τ^2	Trim and Fill r Estimate ^d
	Number of Effects	Total Sample Size	Separated Number of Effects	Number of Effects						
Antecedents of marketing standardization	102	22656	0	0						
<i>Foreign market characteristics</i>										
Environment similarity (+) ^e	46	9578	28	2	0.260***	0.14-0.38	***	0.123	0.037	UC ^f
Competitive intensity (-)	30	5588	3	7	-0.083*	-0.18-0.02	***	0.020	0.013	UC
Export market development (-)	10	2363	0	4	-0.175***	-0.23(-0.12)	0.995	0.000	0.004	UC
Psychic distance (-)	4	1111	0	2	-0.386***	-0.51(-0.25)	*	0.008	0.008	-
<i>Firm/Management characteristics</i>										
International experience (-)	2	516	0	2						
Firm size (-)	51	12205	8	10	-0.088	-0.21-0.03	***	0.062	0.026	UC
Centralization (+)	11	2027	6	4	0.101	-0.06-0.25	***	0.062	0.037	UC
Management commitment (-)	7	1168	6	1	0.306**	0.06-0.52	***	0.113	0.077	UC
Foreign market coverage (+)	7	2267	1	6	-0.188***	-0.26(-0.11)	***	0.007	0.006	UC
Preceding year's performance (+)	6	1542	4	2	0.034	-0.09-0.16	***	0.019	0.016	UC
<i>Product characteristics</i>										
Product type ^g (+)	2	932	0	2	-0.104***	-0.16(-0.05)	0.643	0.000	0.003	-
Consequences of marketing standardization	5	873	3	2						
International performance (+)	5	873	3	2	-0.001	-0.19-0.18	***	0.038	0.033	-0.044 (1)
Economic performance (+)	39	8003	20	19	0.036	-0.06-0.13	***	0.092	0.027	UC
Strategic performance (+)	27	4942	14	13	0.000	-0.121-0.122	***	0.097	0.034	UC
	11	1871	6	5	0.059	-0.16-0.273	***	0.130	0.075	UC

Table 1: (continued)

Constructs	Promotion standardization				Corrected Mean r^a	95% Interval of r	p -Value for Q^b	τ^c	Standard Error of τ^2	Trim and Fill r Estimate ^d	
	Number of Effects	Total Sample Size	Separated Number of Effects	0							
Antecedents of marketing standardization	79	15917									
<i>Foreign market characteristics</i>	36	6518									
Environment similarity (+)	25	3444	19	6	0	0.303***	0.16-0.44	***	0.150	0.051	UC
Competitive intensity (-)	6	1505	3	3	0	-0.082	-0.28-0.12	***	0.060	0.046	UC
Export market development (-)	3	1053	0	3	0	-0.135***	-0.19(-0.08)	0.989	0.000	0.003	UC
Psychic distance (-)	2	516	0	2	0	-0.444***	-0.65(-0.18)	***	0.042	0.042	-
<i>Firm/Management Characteristics</i>	37	8581									
International experience (-)	11	2605	0	11	0	-0.219***	-0.34(-0.09)	***	0.043	0.025	UC
Firm size (-)	9	1691	4	5	0	0.155	-0.03-0.33	***	0.076	0.052	UC
Centralization (+)	6	626	6	0	0	0.395***	0.12-0.61	***	0.128	0.090	UC
Management commitment (-)	4	1694	1	3	0	-0.036	-0.10-0.03	0.142	0.002	0.004	UC
Foreign market coverage (+)	5	1033	3	2	0	-0.060	-0.19-0.07	***	0.014	0.016	-0.086 (1)
Preceding year's performance (+)	2	932	1	1	0	-0.030	-0.10-0.04	0.242	0.001	0.003	-
<i>Product characteristics</i>	6	818									
Product type (+)	6	818	2	4	0	0.009	-0.18-0.20	***	0.048	0.038	0.029 (1)
Consequences of marketing standardization	25	4269									
International performance (+)	25	4269	15	9	1	0.084	-0.04-0.21	***	0.092	0.037	UC
Economic performance (+)	14	2042	10	3	1	0.176**	0.004-0.338	***	0.099	0.055	UC
Strategic performance (+)	10	1432	8	2	0	0.206**	0.018-0.379	***	0.084	0.052	UC

Table 1: (continued)

Constructs	Price standardization				Corrected Mean r^a	95% Interval of r	p -Value for Q^b	$\tau^{c,e}$	Standard Error of r^2	Trim and Fill r Estimate ^d	
	Number of Effects	Total Sample Size	Separated Number of Effects	0							
Antecedents of marketing standardization	51	12660									
<i>Foreign market characteristics</i>											
Environment similarity (+)	24	5334	13	2	0	0.399***	0.26-0.52	***	0.089	0.089	UC
Competitive intensity (-)	15	2531	0	3	1	-0.126	-0.28-0.03	***	0.022	0.022	UC
Export market development (-)	4	1307	2	1	0	-0.217	-0.49-0.10	***	0.073	0.093	UC
Psychic distance (-)	3	990	0	2	0	-0.512*	-0.84-0.10	***	0.225	0.324	-
<i>Firm/Management characteristics</i>											
International experience (-)	24	6861									
Firm size (-)	7	1996	2	5	0	-0.036	-0.12-0.05	***	0.008	0.007	UC
Centralization (+)	5	863	2	3	0	-0.056	-0.23-0.12	***	0.028	0.029	UC
Management commitment (-)	3	376	2	1	0	0.100	-0.22-0.40	***	0.072	0.081	UC
Foreign market coverage (+)	4	1697	1	3	0	-0.021	-0.07-0.03	0.687	0.000	0.002	UC
Preceding year's performance (+)	3	997	1	2	0	0.004	-0.21-0.21	***	0.031	0.036	UC
<i>Product Characteristics</i>											
Product type (+)	2	932	2	0	0	0.082***	0.02-0.14	0.664	0.000	0.003	-
Consequences of marketing standardization	3	465	1	2	0	-0.048	-0.17-0.08	0.199	0.005	0.012	UC
International performance (+)	17	3223	12	5	0	0.122**	0.01-0.23	***	0.045	0.023	UC
Economic performance (+)	11	1519	7	3	1	0.024	-0.173-0.220	***	0.102	0.061	UC
Strategic performance (+)	4	326	3	1	0	-0.030	-0.252-0.194	***	0.040	0.044	UC

Table 1: (continued)

Constructs	Distribution standardization				Corrected Mean r ²	95% Interval of r	p-Value for Q ^b	τ ^c	Standard Error of τ ²	Trim and Fill r Estimate ^d	
	Number of Effects	Total Sample Size	Separated	Number of Effects							
Antecedents of marketing standardization	48	12277	+	0							
<i>Foreign market characteristics</i>	21	4877									
Environment similarity (+)	13	2189	12	1	0	0.389***	0.23-0.53	***	0.093	0.044	UC
Competitive intensity (-)	3	1086	0	3	0	-0.117***	-0.18-(-0.06)	0.411	0.000	0.003	-0.107 (1)
Export market development (-)	3	1086	0	3	0	-0.093	-0.24-0.06	***	0.014	0.018	UC
Psychic distance (-)	2	516	0	2	0	-0.382***	-0.45-(-0.31)	0.858	0.000	0.006	-
<i>Firm/Management characteristics</i>	25	6993									
International experience (-)	7	1699	0	7	0	-0.121***	-0.19-(-0.05)	0.112	0.003	0.005	UC
Firm size (-)	5	1330	3	2	0	0.172	-0.09-0.41	***	0.081	0.073	UC
Centralization (+)	4	480	4	0	0	0.252*	-0.03-0.50	**	0.076	0.070	UC
Management commitment (-)	5	1860	1	4	0	-0.123***	-0.19-(-0.06)	0.132	0.002	0.004	UC
Foreign market coverage (+)	2	692	1	1	0	-0.002	-0.24-0.23	***	0.026	0.042	-
Preceding year's performance (+)	2	932	2	0	0	0.021*	-0.04-0.08	0.803	0.000	0.003	-
<i>Product characteristics</i>	2	407									
Product type (+)	2	407	2	0	0	0.158***	0.06-0.25	0.379	0.000	0.007	-
Consequences of marketing standardization	19	3545									
International performance (+)	19	3545	14	5	0	0.122*	-0.01-0.25	***	0.077	0.036	UC
Economic performance (+)	12	1957	6	6	0	0.083	-0.134-0.293	***	0.125	0.078	UC
Strategic performance (+)	9	1302	6	3	0	0.173	-0.103-0.424	***	0.190	0.119	UC

Table 1: (continued)

Constructs	Program ^b standardization			Corrected Mean <i>r</i> ^c	95% Interval of <i>r</i>	<i>p</i> -Value for <i>Q</i> ^b	τ^2	Standard Error of τ^2	Trim and Fill <i>r</i> Estimate ^d
	Number of Effects	Total Sample Size	Separated Number of Effects						
Antecedents of marketing standardization	24	3593	0						
<i>Foreign market characteristics</i>	9	1245	0	0.550***	0.33–0.71	***	0.168	0.101	UC
Environment similarity (+)	9	1245	8	1	0				
Competitive intensity (-)	-	-	-	-	-	-	-	-	-
Export market development (-)	-	-	-	-	-	-	-	-	-
Psychic distance (-)	-	-	-	-	-	-	-	-	-
<i>Firm/Management characteristics</i>	15	2348	0						
International experience (-)	3	748	1	2	0	***	0.044	0.051	UC
Firm size (-)	5	650	4	1	0	***	0.027	0.026	UC
Centralization (+)	4	504	3	1	0	***	0.214	0.204	UC
Management commitment (-)	3	446	0	3	0	**	0.019	0.026	UC
Foreign market coverage (+)	-	-	-	-	-	-	-	-	-
Preceding year's performance (+)	-	-	-	-	-	-	-	-	-
<i>Product characteristics</i>									
Product type (+)	-	-	-	-	-	-	-	-	-
Consequences of marketing standardization	23	3743	0						
Economic performance (+)	23	3743	17	6	0	***	0.144	0.055	UC
International performance (+)	15	1989	10	5	0	*	0.189	0.089	UC
Strategic performance (+)	6	527	5	1	0	*	0.059	0.046	UC

p*<0.10; *p*<0.05; ****p*<0.01

^aThe corrected mean correlation coefficients (*r*s) are the sample-size-weighted, reliability-corrected estimates of the population correlation coefficients

^b*Q* is a Chi-square statistic that indicates whether the heterogeneity variance is significantly greater than zero

τ^2 is the variance of the corrected mean effect size *r*

^c“Random-random effects trim and fill model” is used. The numbers in the parentheses denote the potential missing studies

^dThe “+” and “-” in the brackets indicate that the majority of the reviewed studies hypothesize the relationship between each dimension of marketing-mix standardization and its antecedents/consequences to be positive and negative, respectively

^e“UC” denotes that the estimated summary effect size remains unchanged as no potential studies are missing

^f“Product type” is a categorical variable where “0” denotes consumer products and “1” indicates industrial products. Therefore, a “+” sign means previous research hypothesizes that a standardized marketing strategy is more likely to be adopted for industrial products in comparison to consumer products

^hReferring to studies that treat marketing-mix program standardization as a whole and cannot separate the relationships into the four dimensions of product, promotion, price, and distribution standardization



Table 2: Antecedents: Intercorrelations among constructs

	1	2	3	4	5	6	7	8	9	10	11	VIF
1. Product standardization	0.812											-
2. Promotion standardization	0.331 (16) ^a	0.845										-
3. Price standardization	0.305 (16)	0.367 (14)	0.838									-
4. Distribution standardization	0.291 (15)	0.484 (15)	0.414 (14)	0.854								-
5. Environmental similarity	0.196 (30)	0.181 (25)	0.316 (15)	0.285 (13)	0.814							1.057
6. Competitive intensity	-0.071 (10)	-0.062 (6)	-0.064 (4)	-0.063 (3)	0.081 (3)	0.775						1.092
7. Export market development	-0.138 (4)	-0.110 (3)	-0.002 (3)	-0.105 (3)	-0.154 (1)	0.244 (2)	0.778					1.193
8. International experience	-0.061 (18)	-0.132 (11)	-0.025 (7)	-0.095 (7)	-0.009 (8)	0.119 (3)	0.114 (1)	0.771				1.328
9. Firm size	0.137 (11)	0.116 (9)	-0.008 (5)	0.137 (5)	-0.050 (7)	0.069 (2)	0.099 (2)	0.372 (4)	0.828			1.288
10. Management commitment	-0.153 (7)	-0.019 (4)	-0.017 (4)	-0.107 (5)	-0.036 (1)	0.128 (4)	0.293 (2)	0.369 (5)	0.148 (2)	0.797		1.281
11. Foreign market coverage	0.032 (6)	-0.104 (5)	-0.001 (3)	-0.050 (2)	-0.117 (1)	0.060 (1)	0.040 (1)	0.248 (4)	0.367 (3)	0.219 (2)	0.819	1.221

Off-diagonal entries represent the average sample-size-weighted correlation (*r*) values. Entries on the diagonal reflect sample-size-weighted mean reliabilities (Cronbach's α)

Error variances for each construct indicator were fixed at (1 - α), where α is the sample-size-weighted reliability across studies (Viswesvaran and Ones 1995), and the harmonic mean of sample sizes across studies ($n = 792$) was used for estimation purposes (Franke and Park 2006; Viswesvaran and Ones 1995)

^aThe number in the brackets denotes the number of relationships included in the analysis



Table 3: Model estimation results: Antecedents of international marketing standardization

	Independent variables		Dependent variables					
	Product standardization		Promotion standardization		Price standardization		Distribution standardization	
	β^a	t-Value	β	t-Value	β	t-Value	β	t-Value
1. Environmental similarity (+) ^b	0.309	6.703***	0.140	2.582*	0.589	11.836***	0.406	9.245***
2. Competitive intensity (-)	-0.098	-2.451*	0.063	1.032	-0.305	-5.550***	-0.100	-2.040*
3. Export market development (-)	-0.038	-0.469	-0.449	-4.202***	0.394	4.156***	-0.042	-0.519
4. International experience (-)	-0.131	-1.626	-0.710	-7.236***	0.052	0.619	-0.327	-4.428***
5. Firm size (-)	0.290	5.134***	0.635	9.661***	-0.075	-1.300	0.421	8.369***
6. Management commitment (-)	-0.196	-2.074*	0.632	5.337***	-0.225	-2.217*	0.046	0.530
7. Foreign market coverage (+)	0.086	1.658	-0.349	-6.026***	0.188	3.576***	-0.084	-2.451*
R ² (squared multiple correlation)	0.227		0.389		0.287		0.295	

$\chi^2=0.001$, d.f.=1, $p=0.97$

GFI=1.000, CFI=1.000, RMSEA=0.000

* $p<0.05$; ** $p<0.01$; *** $p<0.001$

^aStandardized Regression Weight

^bThe “+” and “-” in the brackets indicate that the majority of the reviewed studies hypothesize the relationship between each dimension of marketing mix standardization and its antecedents to be positive and negative, respectively

tional experience, firm size, management commitment, and foreign market coverage on international marketing program standardization. The result is highly consistent with the correlation coefficients and the vote-counting results (see the 'Corrected Mean r ' and the 'Separated Number of Effects' in Table 1). We explore the implications of these findings in the discussion section.

Marketing Standardization-Performance Relationship: Multivariate Assessment

While the vast majority of studies in the literature propose and test a direct relationship, recent studies suggest that there may not be a direct link between international marketing program and performance (Hultman et al. 2009; Katsikeas et al. 2006; Li 2010). To avoid leaving either of the propositions unverified, in the following sections, we first examine the alternative consequences models of marketing standardization, and we then explore the variance in the marketing standardization strategy-performance relationship which is due to measurement difference and sample characteristics.

Alternative Model of Standardization-Performance Relationship: Direct Effects

In this review, a total of 68 independent samples examined the relationship between marketing-mix standardization and international performance. The meta-analytical correlations are shown in Table 4. The VIFs range from 1.187 to 1.442 (see Table 4), indicating that multi-collinearity is not an issue for the analysis.

A detailed review reveals that the relationship among the four elements of marketing-mix strategy is a neglected topic in previous empirical studies, although some researchers highlight the important role of the interdependence between these four strategic components in this field (e.g., Johnson and Arunthanes 1995; Rao 1984). In addition, a recent empirical study by Sousa and Bradley (2009) has found that product adaptation, promotion adaptation, and distribution adaptation positively influenced price adaptation. Therefore, apart from hypothesizing that each element of marketing-mix standardization independently influences international performance, we tested the alternative model by considering possible interdependent effects between the four elements of marketing program standardization. Specifically, we tested the Model A shown in Fig. 2 and all its nested models including the traditional model where each element of marketing-mix standardization has a direct effect on international performance (please refer to the note of Fig. 2 for the result). The results of model comparison show that the most plausible model is the nested model with only solid lines connected (Model B). This model (see Fig. 2) indicates a very good fit to the data, Chi-square=0.394; d.f.=1; GFI=1.000; CFI=1.000; RMSEA=0.000, suggesting that product standardization, distribution standardization, and price standardization have significantly direct effects on international performance, and the first two have also indirect impacts on international performance, while promotion standardization has only an indirect impact on international performance through the mediating effect of price standardization. Notably, this revised Model B not only fits the data better, but is also consistent with previous studies (e.g., Sousa and Bradley 2009). It has been shown that to ensure profitability, price strategy is usually decided after product

Table 4: Consequences: Intercorrelations among constructs

	1	2	3	4	5	6	7	VIF
1. Product standardization	0.812							1.187
2. Promotion standardization	0.331 (16) ^a	0.845						1.418
3. Price standardization	0.305 (16)	0.367 (14)	0.838					1.301
4. Distribution standardization	0.291 (15)	0.484 (15)	0.414 (14)	0.854				1.442
5. Economic performance	0.013 (27)	0.163 (14)	0.080 (11)	0.106 (12)	0.800			–
6. Strategic performance	0.150 (11)	0.290 (10)	0.270 (4)	0.241 (9)	0.510 (7)	0.822		–
7. International performance	0.025 (39)	0.078 (25)	0.118 (17)	0.114 (19)	–	–	0.824	–

Off-diagonal entries represent the average sample-size-weighted correlation (r) values. Entries on the diagonal reflect sample-size-weighted mean reliabilities (Cronbach's α)

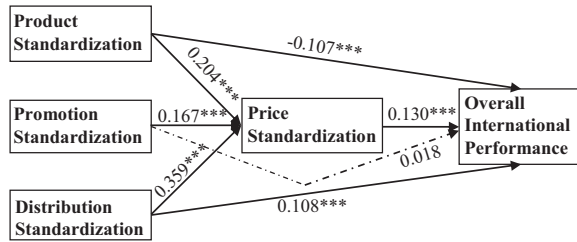
Error variances for each construct indicator were fixed at $(1-\alpha)$, where α is the sample-size-weighted reliability across studies (Viswesvaran and Ones 1995), and the harmonic mean of sample sizes across studies was used for estimation purposes (Franke and Park 2006; Viswesvaran and Ones 1995). Therefore, $n=3937$ and $n=1364$ are used for Models in Fig. 2 and 3, respectively

^aThe number in the brackets denotes the number of relationships included in the analysis

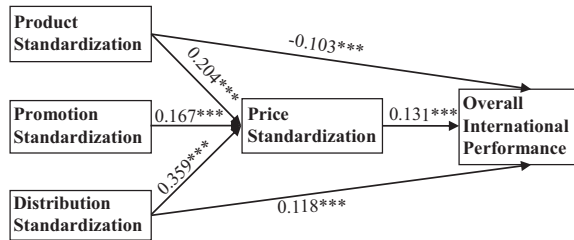
strategy, promotion strategy, and distribution strategy have been confirmed (e.g., Lee and Staelin 1997; Rao 1984). Based on the path dependence theory which indicates that pre-set strategies often impose constraints on subsequent strategic decisions, we would expect an adapted strategy in product, promotion, and distribution to cause a difference in the cost which will be reflected in the price strategy (Sousa and Bradley 2009). Therefore, product, promotion, and distribution standardization will have a positive impact on price standardization. In addition, in terms of the direct effect of promotion strategy on international performance, previous empirical studies reported very mixed correlation findings (15 positive, 9 negative, and 1 zero, with nearly half of the tested hypothesized promotion standardization-performance relationships proving to be non-significant, see Table 1). In practice, it is unlikely that the international standardization or adaptation of market promotion strategy alone exerts a significantly direct impact on international performance, because usually functional and price features (i.e., production strategy, distribution strategy, and price strategy) are the essential drivers of customers' purchase behaviour (Gerpott and Jakopin 2005). Therefore, we would expect promotion standardization to have only an indirect influence on international performance, as is shown in Model B.

Although only a portion of the reviewed studies provided information on separated performance measures, the results generated from these limited studies may also enrich our understanding of this issue. Therefore, we also tested the full model C (see Fig. 3) and all its nested models where international performance was separated into financial performance and strategic performance. The results of model comparison show that the most plausible model is the full model C shown in Fig. 3. Considering Figs. 2 and 3 jointly, we

Fig. 2: Consequence model of international marketing program standardization for overall performance (harmonic mean of sample sizes across studies: $n=3937$)

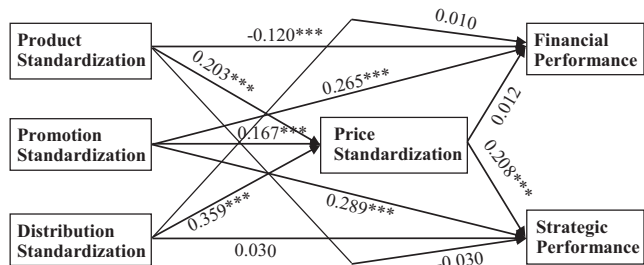


Note: Result for the traditional model (for comparison): product standardization → international performance: $\beta = -0.107, p < 0.001$; promotion standardization → international performance: $\beta = 0.018, p > 0.1$; price standardization → international performance: $\beta = 0.130, p < 0.001$; product standardization → international performance: $\beta = 0.108, p < 0.001$.



Chi-square= 0.394; d.f. = 1; GFI = 1.000; CFI = 1.000; RMSEA = 0.000
 *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$

Fig. 3: Consequence model of overall international marketing program standardization for separated performance measures (harmonic mean of sample sizes across studies: $n=1643$)



Chi-square= 0.169; d.f. = 1; GFI = 1.000; CFI = 1.000; RMSEA = 0.000
 *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$

could conclude that price standardization is positively influenced by product, promotion, and distribution standardization. In general, we believe that the results of Model B are more representative, as they are based on data from many more empirical studies.

Marketing Standardization-Performance Relationship: Moderating Effects

As mentioned previously, we conducted homogeneity tests for the relationships between international marketing-mix standardization and international performance using the procedures that Borenstein et al. (2009) implemented. The results show statistically significant Chi-square values for product standardization-performance relationship ($\chi^2_{39} = 37.6, p < 0.001$), for promotion standardization-performance relationship ($\chi^2_{25} = 379.1,$

Table 5: International marketing standardization-international performance correlations by levels of moderator variables: subgroup analysis and meta-regression

Moderating variables		Marketing-mix standardization-international performance correlations			
		Product-performance	Promotion-performance	Price-performance	Distribution-performance
Performance measure type	Single performance ^a	0.021 ^b	0.142	0.197	-0.021
	Multiple performance	0.081	0.028	0.046	0.179
	Q-value (<i>p</i> -value) ^c	7.290 (<i>p</i> <0.01)	11.504 (<i>p</i> <0.01)	13.643 (<i>p</i> <0.01)	1.660 (<i>p</i> >0.10)
Region focus	America	0.046	0.041	0.156	0.158
	Asia	0.032	0.092	0.187	0.242
	Europe	0.082	0.102	0.097	0.109
	Q-value (<i>p</i> -value)	0.297 (<i>p</i> >0.10)	0.133 (<i>p</i> >0.10)	0.459 (<i>p</i> >0.10)	0.457 (<i>p</i> >0.10)
Publication date	β coefficient	0.0002	0.0002	-0.0001	0.0002
	(<i>p</i> -value)	(<i>p</i> <0.01)	(<i>p</i> <0.05)	(<i>p</i> >0.10)	(<i>p</i> <0.01)

^a“Single performance” denotes the performance measures of a study involve only financial or strategic dimensions, while “Multiple performance” means the performance measures of a study involve both financial and strategic dimensions

^bData in the table are the corrected mean point estimates for each subgroup

^cQ is a Chi-square statistic that indicates whether the heterogeneity variance is significantly greater than zero

$p < 0.001$), for price standardization-performance relationship ($\chi^2_{17} = 143.7$, $p < 0.001$), and for distribution standardization-performance ($\chi^2_{19} = 26.5$, $p < 0.001$). This is a sign that further within-group analyses based on relevant sample and measurement characteristics are needed to explain the variance (Borenstein et al. 2009; Hunter and Schmidt 1990). Therefore, based on the information available we examined the moderating effects of measurement characteristics (i.e., different dimensions of performance indicators are used in the primary studies), and sample characteristics (including region focus and publication date). Meta-regression analyses are adopted for continuous variable publication dates. For categorical variables such as region focus, and different measures of performance, subgroup analyses are used. Following the recommendations by Borenstein et al. (2009) for the subgroup analyses, we chose a random-effects model, which is more appropriate in most cases. The results of these moderating tests in Table 5 indicate that the use of different performance measures (i.e., single vs. multiple measures) has a significant impact on the reported relationship between international marketing-mix standardization and international performance. Table 5 also shows that the international marketing standardization-performance relationship is not significantly attributed to region focus, while it is also positively linked to the publication date of the study. We discuss these results further in the following section.

Discussion and Implications

Implications and Future Research

Based on the results of our meta-analysis of the antecedents and consequences of international marketing program standardization, several issues deserve some discussion and need to be addressed in subsequent research for advancement in this research area. Firstly, the meta-analysis discloses some unexpected results in respect of the relationships between international marketing program standardization and its antecedents (Table 3). Specifically, export market development is found to have a non-significant influence on both product standardization and distribution standardization, which may indicate that export market development is not as relevant as other determinants such as environmental similarity and international experience (Vrontis et al. 2009). However, due to the small number of studies on export market development, its influence needs further examination. Competitive intensity is found to have a non-significant influence on promotion standardization, which may suggest that managers do not take into account the level of competitive intensity when deciding promotion strategies. However, competitive intensity was found to play a key role in explaining price, product, and distribution strategies in the foreign market. In addition, two of the findings indicate unexpected directions. Namely, export market development is demonstrated to have a positive effect on pricing standardization, which is very surprising and no plausible explanations are presented in previous empirical studies. A possible explanation is that in the more developed markets, consumers are more aware of gathering and comparing worldwide price information via the internet, and therefore, different prices for the same product may not be accepted by them. Foreign market coverage is seen to negatively influence promotion standardization, which may suggest that the increased international experience along with the increasing number of markets motivates and enables firms to implement a more market-oriented adaptation strategy. However, more empirical research efforts are needed to explore possible explanations. As a rule, researchers should be encouraged to request practical explanations from the respondents when unexpected or surprising results are found.

Secondly, the analysis of the marketing standardization-performance relationship demonstrates the strong mediating role of price standardization on the relationships between the other three elements of marketing-mix standardization strategy and international performance (Fig. 2). One possible reason for this finding is that the overall impact of product/promotion/distribution standardization on international performance is determined by the summation of increase/decrease in PUV (perceived use value) and production costs (Birnik and Bowman 2007), which to some extent will be reflected in the degree of price standardization (Sousa and Bradley 2009). This is noteworthy, as it validates the presence of interplay between the four elements of marketing-mix standardization strategy and possible indirect effects of standardized strategies on performance. The interdependence of these four elements has been emphasized as an important research topic in the literature (Diamantopoulos 1991; Rao 1984). The focus on the interdependence may not just add a new research topic, but also and more importantly, a vehicle for allowing insights into the strategic synergy that may exist, and how this synergy might work towards producing superior performance in practice. This particular research angle has been ignored

by most previous primary-level studies and prior review studies. However, this meta-analysis confirms the interdependent relationships among the elements of marketing-mix standardization and their influences on performance, thereby indicating a good starting point for relevant research. Although we can only test the mediating model instead of a moderating model in this meta-analysis due to the lack of original data, the specification of a moderating model in examining the interaction among the four dimensions of international marketing-mix standardization should also be considered in subsequent research. Therefore, we encourage future researchers to allocate more attention to this topic and to consider testing the robustness of the demonstrated relationships in this study.

Thirdly, the influence of each element of marketing-mix standardization on international performance in this study is somewhat different from Shoham's (2003) meta-analytical findings. Shoham (2003) reports that product and distribution standardization have a negative effect on international performance while price and promotion standardization have a non-significant impact on international performance. In our study, however, the results indicate that product standardization has a negative effect on international performance, promotion standardization has a non-significant impact on international performance, while price and distribution standardization have a positive effect on international performance. The consistent negative impact of product standardization on international performance strongly indicates that, nowadays customized rather than standardized products, are more attractive to consumers and more competitive in foreign markets. Regarding the inconsistent findings between Shoham's (2003) study and ours, aside from attributing these to the difference in sample size and the use of a meta-analytical methodology, it is very likely that each meta-analytical study captures only one different part of the truth. If so, the previous assumption about the linear relationship between marketing standardization and international performance should be revised to a nonlinear one (Dow 2006; Tan and Sousa 2011). In addition, the failure to consider potential moderators (e.g., cost leadership strategy, stage of product life cycle, technological turbulence, and marketing capabilities, among others) and/or possible mediators (e.g., competitive advantages) may also account for the differences. Therefore, future research may consider revising the linear relationship assumption and/or include moderators and mediators, in order to model the true relationships more precisely.

Fourthly, the findings of the moderating test indicate that the relationship between international marketing-mix standardization tends to be different when studies use different measures of performance (i.e., single vs. multiple measures). This shows that the choice of performance measurement in international business research is a very important aspect to consider. Hence, researchers should always be aware of choosing appropriate performance measures that capture the multifaceted nature of the construct and match their specific unit of analysis (Hult et al. 2008). The findings also demonstrate that the region focus (America vs. Europe vs. Asia, see Table 5) has no significant contribution to the existing variance in marketing standardization-performance relationships. This is consistent with the findings of a previous meta-analytical study by Leonidou et al. (2002) which indicates that although most scholars worry about the external validity of findings in single-country studies, this may not be a significant issue. However, contrary to the findings of Leonidou et al. (2002), we detected that the publication date tended to have a positive influence on international marketing standardization-performance relationship

reported, although the magnitude is trivial. Aside from the moderators we have examined, the variance between marketing standardization-performance relationships among studies may be further explained by the influence of some substantive moderators such as cost-leadership competitive strategy, stage of product life cycle (Samiee and Roth 1992), and technological turbulence (Li 2010). Therefore, the results suggest that future research should adopt more rigorous statistical methods, continue to examine the magnitude of the moderating effects of the demonstrated variables, and explore the potential substantive moderators.

Fifthly, this study also discloses some under-researched topics. For example, psychic distance and the preceding year's performance are important antecedents of international marketing program standardization, but very few studies have examined them in the past few decades. In addition, relevant research focused on SMEs, service industries, African countries, and single industries has also been neglected and these areas merit more attention in the future.

Sixthly, we believe researchers should shift the focus from considering whether a positive/negative relationship exists between marketing program standardization/adaptation and international performance, since this has been extensively discussed over the past half century and no agreement has been reached. The attempt to achieve an agreement simply by conducting more repetitive studies is unrealistic, because the majority of researchers have acknowledged that these relationships are essentially context-sensitive and depend to a great degree on (i) managers' sound judgment about the environment, (ii) the fit between environment and strategy, and (iii) how effectively the strategy is executed (Subramaniam and Hewett 2004; Yaprak et al. 2011). Thus, to gain further insights, we need to focus on examining these contingency factors. Although the normative guidelines about environmental characteristics have been extensively studied, the strategic fit and the effectiveness of implementing the strategies have been largely ignored in the literature. As long as the influences of those contingency factors remain unclear, the results are likely to continue to be inconsistent, regardless of how many repetitive studies are undertaken.

Seventhly, the path dependence theory may be introduced to better direct future research on international marketing standardization/adaptation strategy. Several theories (e.g., theory of friction, theory of profit maximization, institution theory, etc.) have been used to support either a standardized or adapted international marketing strategy (Schmid and Kotulla 2011). Subsequent contingency theory and fit theory further help researchers to develop normative guidelines to choose between the two strategies and explain the marketing strategy-performance relationship, respectively. Specifically, contingency theory suggests that firms should adopt a standardized international marketing-mix strategy when certain situational factors are present (e.g., homogeneous demand). Fit theory posits that superior performance can only be achieved when the chosen strategy (either standardization or adaptation) matches the environment (Katsikeas et al. 2006). However, previous theories may provide insufficient support for the findings of the meta-analysis as they neglect the important role of firms' past strategies in constraining subsequent international marketing strategy. Therefore, path dependence theory might be useful to address this issue, as explained below.

In terms of the choice between international marketing standardization and adaptation, although the antecedent models have included the majority of the influential factors proposed by previous studies (i.e., environmental similarity, competitive intensity, export market development, international experience, firm size, management commitment, foreign market coverage), they only explain a portion of the variance (ranging from 22.7 % to 38.9%, see Table 3). This indicates that the firms' actual strategic choices between international marketing standardization and adaptation are not favourably conformed to these normative guidelines as suggested by researchers. A possible explanation is that the underlying assumption behind these guidelines that companies can make completely unconstrained choices regarding international marketing strategy, may be incorrect. According to the path dependence theory, the history always matters and the sequence of events is essential in explaining social outcomes (Pierson 2000). Therefore, the rational choice between a standardized and an adapted marketing strategy cannot be considered as a completely separate process without any imprints from past strategies (Sydow et al. 2009). Specifically, as international marketing strategy performs functionally and works at a lower level within the firm (Leonidou et al. 2002), its choice is very likely to be constrained by other strategies which are at a firm level and usually decided earlier in time (e.g., generic strategy, positioning strategy, innovation strategy, and aggregation strategy, see Solberg 2008). Consequently, less room is left for managers when they are choosing an international marketing strategy between standardization and adaptation due to the need for an overall strategic synergy/complementation.

The study on the relationship between international marketing strategy and international performance can be further explored using path dependence theory. In the past, the majority of studies have tended to agree that research should hypothesize a direct relationship between the two. However, we believe that the focus should be on finding out some important moderators that might change the magnitude/direction of the international marketing strategy-performance relationship, thus further explaining how a superior performance can be achieved. Based on contingency and fit theory, the moderators are centred on environmental factors. If, however, we consider the path dependence theory, the moderators can be further expanded. That is, by including the firm-level strategies which are previously in the background of research on the international marketing strategy-performance relationship, we can examine whether and to what extent, the international marketing strategy-performance relationship is influenced or confounded by these strategies. Although not directly referring to the path dependence theory, a few recent studies (e.g., Hughes et al. 2010; Schilke et al. 2009; Solberg 2008) have shown increasing concerns about the need to align a firm's international marketing strategy to its generic strategy. Therefore, with the introduction of more broad theoretical bases such as the path dependence theory, deeper insights regarding the research on international marketing strategies can be generated.

Finally, the heated discussion on the nature of relationships between constructs and their measures (i.e., reflective versus formative measurement models) warrants our closer attention in subsequent empirical research (Diamantopoulos 2008). Although the debate on the need to adopt formative measures is still ongoing and many related issues remain unsolved, undoubtedly a more rigorous approach to specify the measurement models will have to be considered (Diamantopoulos and Siguaw 2006; Jarvis et al. 2003). Therefore,

future researchers should devote more effort to developing justifiable measurement models in order to guarantee the correctness of the estimates of the structural parameters, which set the foundation for theory testing and development (Jarvis et al. 2003).

Conclusion

This study extends prior efforts to synthesize the extant studies on international marketing-mix standardization/adaptation by integrating all the effect sizes available, examining a comprehensive antecedents model, presenting and revising a consequence model. Responding to the research calls by Shoham (2003), our study examines a broader scope (including both antecedents and consequences) of international marketing program standardization based on a larger database. More importantly, our study examines the interdependence between the four elements of marketing-mix strategy in explaining international performance and explores the potential moderators in marketing standardization-performance relationships. These allow us to discuss the implications of our findings and provide insightful future research directions. Additionally, the findings of our meta-analysis are extremely representative, as we included almost all the empirical studies by the use of standardized beta coefficients, therefore yielding a more plausible external validity than previous meta-analytical studies.

However, a few potential limitations should be noted. One possible limitation is that some relevant independent variables (e.g., centralization, the preceding year's performance, and psychic distance, among others) were not included in the model, as very few studies on international marketing program standardization strategy included those variables. Another possible limitation is that in terms of the antecedent model test and the subgroup analysis, the number of studies is relatively small. While our sample size is comparable to previous meta-analytical studies which used the path model analysis (Palmatier et al. 2006; Shoham 2003; Szymanski and Henard 2001), caution should be exercised in interpreting test results and drawing the conclusions. In addition, product characteristics (e.g., product uniqueness) and some potential substantive moderators (e.g., cost-leadership competitive strategy, stage of product life cycle, and technological turbulence) cannot be explored in this study, as too few empirical studies examined them. Moreover, the possible reverse causality between marketing standardization-international performance link should be considered. Namely, firms' current international performance may exert an impact on subsequent choice between marketing standardization and adaptation. However, we are unable to test this causality, because in primary studies almost all the collected data include only current marketing strategy and current-year performance instead of preceding-year performance. In this case, the test on the reverse causality is not appropriate. This reverse causal link between marketing standardization and international performance may be an interesting topic in subsequent empirical studies. Finally, endogeneity might be an issue in this study. We are unable to address this issue in our meta-analytical design because none of the empirical studies have considered the potential endogeneity bias. Although failure to control for the endogeneity does not necessarily lead to genuine threats to validity, it is desirable that subsequent empirical research check this potential issue and corresponding solutions (Bascle 2008). Despite these potential

limitations, we believe that our meta-analytical findings could be useful to managers during the course of strategic decision-making and execution, and that academic researchers could benefit from the summarized findings and future research directions.

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