

APPLICATION OF THEORY OF DYNAMIC CAPABILITIES TO EXPLICATE INTERNATIONALIZATION OF SMES IN SRI LANKA

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ABSTRACT

Past research indicates that internationalization strengthens SME competitiveness and survival prospects. However, SMEs offer a poor contribution to export income of Sri Lanka compared to other countries. At present there is little agreement among scholars on a theoretical framework of SME internationalization. According to recent research a broad consensus on the theoretical importance of dynamic capabilities for SME internationalization has been reached. Still, how firms develop dynamic capabilities to address internationalization challenges remain much unexplored with paucity of research studies linking two concepts. Researchers explain SME internationalization from a dynamic capabilities perspective arguing that in highly dynamic international environment, dynamic capabilities explain the advantage in internationalization process. This research used dynamic capability framework to analyze the antecedents of SME internationalization in Sri Lanka. This research used a quantitative research methodology based on self-administered questionnaire survey method. A randomly selected sample of 197 export SMEs in Sri Lanka were analyzed. The results were analyzed using Partial Least Squares Structured Equation Modelling (PLS-SEM) method. This study empirically established that organizational dynamic capabilities positively influence internationalization. It also established that perceptual environmental dynamism (market assets position) and reputational assets position positively influences organizational dynamic capabilities. Organizational flexibility (structural assets position) of SME did not have a significant influence on organizational dynamic capabilities. The outcome of this research will enhance the understanding of SME internationalization process and provide insights for policy makers and SME managers.

Keywords: dynamic capabilities, small and medium scale enterprise, internationalization, flexibility, reputational assets

1.0 INTRODUCTION

A majority of large scale businesses flourishing with glory today had humble beginnings as small enterprises. Founders and employees of these small businesses developed them to become successful organizations through resolute commitment, motivation and sacrifices. Small and Medium-sized Enterprises (SMEs) make up over 95% of businesses worldwide and 50 to 60% of global employment (Organization for Economic Co-operation and Development, 2015). Empirical research has emphasized the need to develop a high performing SME sector in order to promote economic and social development of any country (Dalberg, 2011; Omar, Arokiasamy & Ismail, 2009; Griffin & Ebert, 2006).

Internationalization is seen as a critical element in the strategy of SMEs to achieve growth and superior performance (Votoupalova, Toulova, & Kubickova, 2015; Ruigrok & Wagner, 2003). Entering international markets strengthens SME competitiveness which is a necessary condition to withstand high international competition through diversification, economies of scale and learning advantages (Coviello, McDougall & Oviatt, 2011). However, until recently the internationalization research had focused on Multi-National Companies (MNCs) and SME internationalization phenomenon remains less understood (Kazlauskaitė, Autio, Gelbūda & Šarapovas, 2015; Korsakienė & Tvaronavičienė, 2012; Ruzzier, Hisrich & Antoncic, 2006).

There is no clear agreement among scholars on a single theory of internationalization that can explain this complex phenomenon (Eisenhardt & Graebner, 2007). Inadequacy of research on internationalization of SME studies calls for more empirical information because research is largely focused on large or multinational companies (Kazlauskaitė, Autio, Gelbūda & Šarapovas, 2015; Andersson, Evers & Kuivalainen, 2014; Aspelund, 2007). Empirical findings of SME research on internationalization reveal that they are not fully understandable by any theoretical framework (Schulz, Borghoff & Kraus., 2009). Too small sample sizes (Chiao, Yang & Yu, 2006), lack of and difficulties in obtaining accurate data, research focus on specific industries such as concentration on manufacturing industries (McAuley, 2010), lack of empirical data on developing countries (Hussain, Basir & Isa, 2015; Banalieva & Sarathy, 2011) and contradictory research outcomes add to the issue of lack of research. Though internationalization of SMEs has been explained using entrepreneurship approach (i.e. considering the internationalization as an entrepreneurship behavior of the owner), transactional cost approach (i.e. considering the internationalization as an economic opportunity to be exploited) and organizational learning approach (i.e. the SMEs learn and gradually expand into the international market), little success has been reported in fully explaining this complex phenomenon. The literature reveals that neither traditional theories such as economic models of internationalization, process models, network perspective nor international entrepreneurship theory per se are sufficient to explain the phenomenon of SME internationalization successfully (Teece, 2014; Cavusgil & Knight, 2015; Coviello, 2015). All the above theories have not considered the ever increasing dynamic nature and complexity of the international business environment.

Looking at the contribution of SMEs for international trade in Sri Lanka, in spite of the increased strategic significance of internationalization initiatives for the SMEs, there is still an insufficient level of commitment to adopt internationalization practices among SMEs. All internationalized SMEs in Sri Lanka are confined to a single mode of internationalization which is exporting, not contributing to the outward FDI at all. Only 3157 SMEs are listed in Export Development Board (EDB) of Sri Lanka as exporters out of more than million number

of establishments. Furthermore, SME contribution to total exports is around 5% although SMEs account for 82% of registered exporters of the country. SME export structure is quite concentrated, both in terms of product composition and export destinations over the last three decades (EDB, 2014). This makes the SME exports of Sri Lanka highly vulnerable to crisis in few exporting regions and industry sectors. Sri Lankan SME exports are composed mainly of primary goods with technologically stagnant production practices that could be copied by competitors easily (e.g. Sri Lanka's share in high-tech exports averages at 1.8% compared to 75% in Korea, 27% in Thailand and over 50% in Singapore and Malaysia) (Kelegama, 2013). SME exports are highly reliant on low cost advantage and tariff concessions which are being gradually abolished by developed countries and other low cost destinations are becoming preferred by foreign investors (Wijesinha, 2010). In summary, it can be noted that SME contribution to international activities is minimal in Sri Lanka compared to other countries and they face unique challenges and issues in internationalization.

Recent literature suggests that contemporary firm internationalization is not associated with traditional factors such as financial or physical assets or infrastructure. Instead, successful internationalization seems to be associated with directly unobservable owner and firm factors which are rooted in dynamic capabilities (Pangerl, 2013). This research contributes to the literature by advocating a dynamic capabilities perspective of internationalization and operationalization of the full dynamic capabilities model in internationalization context.

This article has eight sections. Dynamic capabilities theory and its relevance will be discussed from section 2 to section 4. Section 5 presents the relationship between organizational resource position and dynamic capabilities. Section 6 is on methodology while section 7 presents the results and the discussion. Section 8 concludes the article.

2.0 DYNAMIC CAPABILITIES THEORY

Teece, Pisano and Shuen (1997) in their classical article have argued that organizations rely on dynamic capabilities to build competitive advantage in regimes of rapid change. Prior to development of dynamic capabilities perspective, Resource Based View (RBV) (Barney, 1991; Peteraf, 1993) was used to explain superior performance. However with globalization, rapid technological development and opening up of global trade, businesses have to confront increasingly volatile environment and the propositions of the RBV were inadequate to explain competitive advantage in dynamic markets (Eisenhardt & Martin, 2000).

Dynamic capability is the capability of an organization to purposefully adapt an organization's resource base. The concept is defined by Teece et al. (1997) as "the firm's ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments". The basic assumption of the dynamic capabilities framework is that core competencies should be used to modify short-term competitive positions that can be used to build longer-term competitive advantage. Dynamic capability theory posits that since contemporary marketplaces are dynamic, more than the simple heterogeneity in firm resource endowments it is the capabilities by which resources of the firms are acquired and deployed in ways that match the firm's market environment that explains inter-firm performance variance (Teece et al., 1997).

In past decades, dynamic capabilities became a very active research area with a multi-discipline approach to study the phenomenon (Barrales-Molina et al., 2013). Up to date, most

contributions are theoretical and conceptual as to be expected in the beginning of any field of research (Helfat & Peteraf, 2009). The empirical studies have multiplied only in recent years and researchers are calling for further theoretical and empirical development (Eriksson, 2013). Empirical work of dynamic capabilities focus on context dependent components of dynamic capability or to identify commonalities in dynamic capabilities. Little has been done to test the validity of the framework as a whole or to identify the antecedents of dynamic capabilities.

3.0 DYNAMIC CAPABILITIES AND INTERNATIONALIZATION

Dynamic capabilities research has focused on the contribution of dynamic capabilities to organizational performance (Wu, He, & Duan, 2013). However, a number of past studies have already used the theory of dynamic capabilities to understand SME internationalization. A broad consensus on the theoretical importance of dynamic capabilities for SME internationalization has been reached (Villar, Alegre, & Pla-Barber, 2013). The literature suggests that dynamic capabilities encourage and facilitate internationalization (Griffith & Harvey, 2001). Luo (2000) argue that dynamic capabilities are necessary for the existence of a firm under very dynamic international business conditions. Griffith and Harvey (2001) refer to 'global dynamic capabilities' as the resource adaptation, integration, and reconfiguring competences by which a firm can achieve both coherence on a global level as well as adequate recognition of the specifics of each country environment. Dynamic capabilities are also important for successful entry and survival in international markets (Sapienza et al., 2006). Teece (2007) makes a special reference to international business environment and highlights the importance and relevance of dynamic capabilities in internationalization.

Recent evidence from research suggest that dynamic capabilities play a key role in export performance. Through a recent quantitative study Villar, Alegre, and Pla-Barber (2013) find out that dynamic capabilities play a mediating role in knowledge management practices and export performance relationship. In a case study on Finnish IT sector SME, Kuuluvainen (2012) argued that dynamic capabilities are important determinant of internationalization success. Knudsen and Madsen (2002) explain that absorptive capacity and informational architecture are critical dynamic capabilities that explain international expansion. A continuous process of building new capabilities and abandoning old, outdated ones, is the key factor to sustainable competitive advantage of multinational organizations (Tallman & Fladmore-Lindquist, 2002). Erikson et al. (2014) illustrate the management cognitive capabilities and organizational flexibility as key generators of dynamic capabilities in international expansion.

The most important objective of contemporary internationalization studies should be to look at the factors that enable managers not only to internationalize but also to build an organization capable of withstanding internationalization advantage in the long term (Al-Aali & Teece, 2013). In a conceptual paper focused on entrepreneurial firms, Weerawardena et al. (2007) explained a model to understand the development of a 'strategic set of dynamic capabilities' as an important requirement for internationalization. Though there is a rise in research interest in dynamic capabilities in international business context, empirical studies are rare and often focus on MNC (Sternad & Jaeger, 2013). Most of the research related to dynamic capabilities and internationalization are carried out in context of developed countries, confined to high tech industry sectors or in the context of large scale organizations (Lisboa, Skarmeas & Lages, 2013). Few preceding research has focused on SME

internationalization, and empirically tested the influence of dynamic capabilities in the context of SME internationalization (Telussa, Stam & Gibcus, 2006; Villar et al., 2013).

4.0 DYNAMIC CAPABILITIES TO EXTEND THE VALIDITY OF INTERNATIONALIZATION THEORIES

Al-Aali and Teece (2013) argue that Ownership Location Internalization (OLI) model proposed by Dunning (1988) on firm internationalization is still effective as a theoretical model to explain internationalization, but emphasis should be placed on dynamism of the organization for sustainable international presence. This dynamism includes adopting transformation capabilities such as selectively phasing out old products, changing business models, methods, and culture. Al-Aali & Teece (2013) suggest incorporating entrepreneurship and dynamic capabilities into the OLI model.

Schweizer, Vahlne & Johanson (2010) endorse that dynamic capabilities perspective is relevant to explain internationalization. They state that “dynamic capability perspective adds a new dimension to the internationalization literature” and can enhance existing internationalization theories. Further, Teece (2006) compares Hymer to more recent dynamic capabilities-based contributions and claims that dynamic capabilities approach can improve upon Hymer’s earlier, rather static, analysis. In addition, according to the process view of internationalization, dynamic capability factors (e.g. organizational learning) are also important for international growth of the firm (Zucchella, Palamara & Denicolai, 2007).

When firms internationalize, they need to maintain both exploration and exploitation capabilities balanced (i.e. ambidexterity which is considered as a dynamic capability). Otherwise there is a risk that the firms may build core rigidities (i.e. either spending too much time exploring the possibilities without learning from the experience to exploit opportunities or vice versa) (Prange & Verdier, 2011). Exploitation more closely resembles gradualist models (organizational learning) and exploration closely resembles the proactive, innovative and risk taking behavior of international entrepreneurship model. So in order not develop core rigidity, the SMEs need to have both characteristics.

There is a clear linkage between dynamic capabilities and international entrepreneurship studies (Lanza & Passarelli, 2014). For example, opportunity search processes are essential for both approaches. Many international entrepreneurship and dynamic capabilities studies share the common themes of resource mobilization, combination and renewal as key input to SME capability development (Kuuluvainen, 2011). Teece (2007) argues that entrepreneurship is about sensing and understanding opportunities and hence entrepreneurship itself is a key dynamic capability.

Teece (2014) mentions that dynamic capabilities particularly such as learning and capability augmentation are neglected in traditional internationalization theories especially in transaction cost theory and process theories. The dynamic capabilities framework for internationalization should take an entrepreneurial approach that underlines the importance of (unique) business processes, both internally and also in linking the organization to external partners.

Luo (2000) argues that classical theories such as OLI theory (Dunning, 1988) highlighted the important of resources but if dynamic capabilities are absent liabilities of foreignness or newness cannot be mitigated. His qualitative research found that capability deployment and

capability upgrading is equally important in internationalization as capability possession (i.e. unique resource base).

Though empirical evidence is rare many scholars have argued that international new ventures internationalize mainly due to internal capabilities (Autio, 2000; Zahra et al., 2000). As per Falahat, Migin, & Chuan (2015), Prange and Verdier (2011) and Gassmann and Keupp (2007) current understanding of the dynamic capabilities and its potential to explain internationalization is incomplete and lacking. Hence the following hypothesis can be formed.

H₁ – Organizational dynamic capabilities positively influence SME internationalization

5.0 ORGANIZATIONAL RESOURCE POSITION AND DEVELOPMENT OF DYNAMIC CAPABILITIES

Not only a firm's distinctive incumbent capabilities but their unique "positions" directly influence the development of dynamic capabilities. These positions include technological, complementary, reputational, market and structural assets (Teece et al., 1997). As suggested by Ambrosini and Bowman (2009), positions and paths are the internal and external forces enabling or constraining dynamic capabilities describing their antecedent behavior. Lavie (2006) posits that the prevailing assets of the organization, and how complex, causally ambiguous, embedded and interdependent they are, will guide the type of dynamic capabilities that firm will deploy and ultimate effectiveness of the deployment.

5.1 Reputational Assets

Corporate reputations and product reputation often summarize a good deal of information about firms and shape the responses of customers, suppliers, and competitors. It is sometimes difficult to disentangle reputation from the firm's current asset and market position (Teece et al., 1997). Reputational assets are best viewed as an intangible asset that enables firms to achieve various goals in the market. It is a kind of summary about the firm's current assets and position, and its likely future behavior and its propensity to develop dynamic capabilities.

SMEs with low or less well known reputation will find it more difficult to obtain finance for expansion or changes, get favorable credit terms from suppliers, get favorable shipping terms from importers and will not be accepted as trade partners by firms in other countries easily (Deelmann & Loos, 2002). Further, organizational changes of reputed organizations are more likely to be viewed in a favorable manner and such organizations are not vulnerable to adverse publicity giving an advantage in capability of the organization to change and be dynamic to suit the environment.

Little research has been carried out to understand the role of corporate reputation in developing dynamic capabilities and internationalization. Besides its key importance especially in internationalization, SMEs pay much less attention to building a good corporate reputation and branded products and are less reputation oriented. This discussion on corporate and product reputation concludes that SMEs with good reputation are more likely to develop dynamic capabilities related to internationalization.

H₂ - Reputational assets position positively influences organizational dynamic capabilities

5.2 Structural Assets Position (Organizational Flexibility)

The formal and informal structure of organizations and their external linkages have an important bearing on the rate and direction of innovation, and how competences and capabilities co-evolve (Teece et al., 1997). Firms with strong dynamic capabilities exhibit technological and market agility. In order to come up with this high agility, less hierarchy must be used (Teece, 2014). As per Teece et al. (1997), responsiveness of the organization is important for achieving long-term advantage as succinctly explained in his seminal article “winners in the international market will be the firms that can demonstrate timely responsiveness and rapid flexibility” (Teece et al. 1997).

Organization structures can span in the spectrum of mechanistic organizations to organic organizations. Mechanistic structures illustrate centralized decision-making, adherence to formal rules and procedures, tight control of information flows, and elaborate reporting structures while organic structures illustrate de-centralized decision-making, open communication, organizational adaptiveness, and lack of emphasis on formal rules and procedures (Lawrence & Lorsch, 1967).

Several authors have argued that structures that resemble organic organizations favor dynamic capabilities generation (Teece, 2000) through flexibility and responsive advantages and increased employee motivation and creativity which are necessary conditions for development of dynamic capabilities. Wilden, Gudergan, Nielsen, & Lings (2013) prove that the organizational structure has a moderating effect on the dynamic capabilities performance relationship. According to Blyler and Coff (2003), complex and formalized routines and structures are too rigid in a high velocity environment and obstruct formation of dynamic capabilities. The following hypothesis is formed as a result of foregone discussion.

H₃ - Structural assets position (Organizational flexibility) positively influences organizational dynamic capabilities

5.3 Market Assets Position (Environmental Dynamism)

According to Teece (1997), the product market position should be analyzed with respect to market dynamism. A strong market share is desired but in dynamic markets this market share can vary significantly within a short time period. Hence, as per Teece (1997), more than the market position, the dynamism of the market environment is important in developing dynamic capabilities and the value of dynamic capabilities are multiplied in dynamic business environment.

Wu (2010) reports that the explanatory power of dynamic capabilities to achieve competitive advantage exceeds RBV in volatile environments. Winter (2003) argues that the rate of change in an industry acts as a likelihood factor in the decision to develop and deploy dynamic capabilities. Barrales-Molina, Bustinza, & Gutiérrez-Gutiérrez (2013) highlight the impact of perceptual environmental dynamism on generation of dynamic capabilities. Their research shows that only organizations in which managers perceive a high level of environmental dynamism develop dynamic capabilities effectively. Accordingly this proves that dynamic capabilities are critical in dynamic environments such as global business environment. Adner and Helfat (2003) suggest that are critical factors of the decisions to develop and deploy different forms of dynamic capability depend on management cognition of perceived environment and perceived resources. According to Shalini, Rogbeer and Michaelis (2015), managerial perception of the environment and its future evolution generate and shape dynamic capability related decisions. Dynamic environment propel firms to

develop frequent resource transformations and invest in new functional capabilities which leads to development of new products and services. Therefore, when environmental dynamism is high, the more likely dynamic capabilities will be valuable to the firm since they offer the firm the chance to pursue new and better promising opportunities.

H4 – Market assets (Environmental dynamism) positively influences organizational dynamic capabilities

From the above review of the literature and hypothesis formulation, the conceptual framework of this study is depicted in Figure 1.

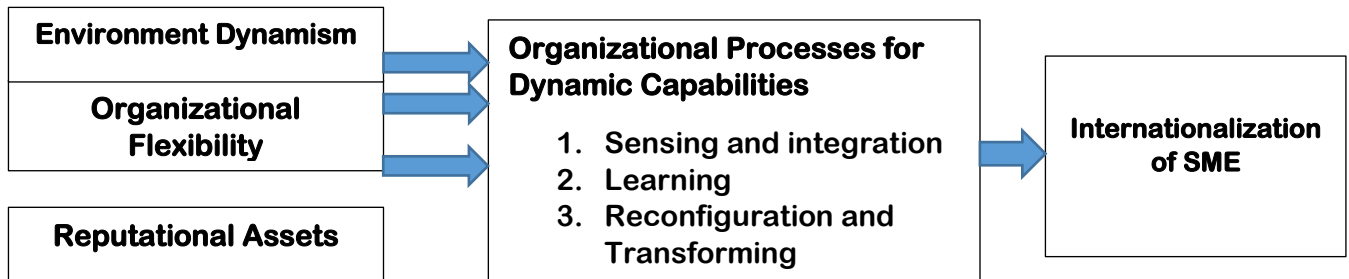


Figure 1. Conceptual framework of the study

6.0 METHODOLOGY

6.1 Sample

To empirically test the developed framework, primary data were gathered using the survey questionnaire method and questionnaires were distributed to randomly selected SMEs involved in exporting. The sampling frame used was the annual register of exporters published by EDB of Sri Lanka. It included 3027 SMEs. 200 SMEs were selected for the study based on random sampling method from the register. Questionnaires were personally administered by visiting the organization. 197 responses were collected after four months from the start of data collection.

This research used the definition of Export Development Board of Sri Lanka which defines export SMEs as “Enterprises having an annual export turnover less than Rs.150 million in a given year”. However, in order to increase comparability of research, this research will impose additional criterion for definition. The number of full time employees working in the organization should be equal or below 250 at the time of research.

6.2 Measurement

To measure sensing and reconfiguration/transformation capabilities, this research adopted the scale developed by Lin & Wu (2013). It is developed based on work of Teece et al. (1997) and Eisenhardt and Martin (2000). This study used the recent scale developed by Flores, Zheng, Rau & Thomas (2010) to measure organizational learning. Since organizational learning is a component of dynamic capabilities in this research only selected items were included in the scale representing dimensions of information distribution, interpretation and integration. Corporate reputation was measured using the uni-dimensional three items scale adopted from Keh & Xie (2009). Covin and Slevin’s (1988) five-item measurement scale assesses the extent to which a firm is structured in organic versus mechanistic way. Measured on a 7-point scale, this scale asks respondents to evaluate the operating management philosophy. This research adopted Covin and Slevin’s (1988) scale on five point Likert scale

used by Wilden et al. (2013). The uni-dimensional scale developed by Tan and Litschert (1994) was used to measure environmental dynamism. It measures managers' perceptions of dynamism in the general and specific environment. This scale has been used and validated in numerous prior studies (e.g. Barrales-Molina, Bustinza, & Gutiérrez-Gutiérrez, 2013; Barrales-Molina, Benitez-Amado & Perez-Arostegui, 2010, Prashantham, 2007).

This research incorporates a multi-dimensional approach and measures internationalization using scale, scope and internal commitment to international activities. Internationalization intensity measures comprised of two components namely FSTS (Foreign Sales to Total Sales) and percentage of employees that spend significant time on international activities (Sullivan, 1994; Sapienza, De Clercq, & Sandberg, 2005). FSTS measurement operationalizes the performance feature of internationalization (Sullivan, 1994). Percentage of employees that spend significant time on international activities will indicate the internal commitment of the organization to internationalization (Sapienza et al., 2005). This research also considered international scope (geographical scope of foreign sales calculated as a single weighted score) (Sullivan, 1994; Sapienza et al., 2005) in measuring internationalization. As per Sapienza, et al. (2005), this research used three zones. Following the same method of Sapienza et al. (2005), weights were assigned to each zone to represent the psychic distance and the number of countries exported in each category were multiplied by weights to arrive at a weighted average score.

7.0 RESULTS AND DISCUSSION

Multivariate assumption test were performed on data to identify the nature of data and quality of data. The normality was tested by Shapiro-Wilk test and all items in all constructs were significant indicating non-normal distribution. Skewness and Kurtosis analysis for normal distribution and visual observation of normality using histograms indicated that data is not perfectly normal, but there is no serious violation of the assumption. Past research indicates that issue of non-normal data is not uncommon in social sciences (Osborne, 2010). Linearity and homoscedasticity were observed by using residual plots vs predicted value which indicated a good random distribution along the horizontal line of zero implying that data is linear and homoscedastic. Variance Inflation Factor (VIF) values for all constructs were below 5 indicating multicollinearity is also not an issue. Common method bias test indicated that maximum variance explained by a single factor is less than 50% (Hair et al., 2010).

7.1 Descriptive analysis of data

On average SMEs in the sample had conducted business for close to 20 years at the time of the survey. The time taken to international market implies the international orientation of the SME. Those who had high international orientation will quickly grab the international opportunities even at the early stage of business with little experience. SMEs in the sample entered the international market less than 3 years on average. The maximum time taken to enter international market was 35 years while 46% of the organizations were internationalized from the inception. 49.7% of the SMEs were under the category of Private Limited Companies while sole trading accounted for 35% and partnerships accounted for 15.2%.

Out of 197, 139 SMEs (70.6%) were involved in manufacturing while 30 and 28 were involved in retail/wholesale business or service business. The manufacturing sector had the largest composition in the sample. But this representation is to be expected give that services

sector still contribute about 10% of export value in Sri Lanka (EDB, 2015). On average, 71.5% of the sales income of the SMEs was attributed to foreign sales in the sample. The minimum foreign income to total income ratio was 2% while 42 SMEs were fully internationalized.

7.2 Reliability Analysis of the Scales

Reliability of the construct was confirmed as all Crobach's alpha values exceeded the threshold value of 0.7 for all construct items (Nunnally, 1978). In Table 1, ODC stands for organizational dynamic capabilities, RA for reputational assets construct, SA for structural assets and EDY for environment dynamism.

Table 1

Reliability statistics for the scales

Construct	N of Items	Reliability Statistics - Cronbach's Alpha
ODC	7	0.903
RA	3	0.904
SA	5	0.935
EDY	4	0.903

As per the methodological literature on SEM, this research adopted a two-step model building approach (Hair et al., 2010; Schumacker & Lomax, 2004). Step one involved Exploratory Factor Analysis (EFA) and then Confirmatory Factor Analysis (CFA), for purified scales, to validate the measures for the final model estimation.

Sample data did not meet the stringent normality test criteria. Past research indicates that issue of non-normal data is not uncommon in social sciences (Osborne, 2010). However, PLS-SEM is robust against non-normal data (Hair et al, 2013; Johansson & Yip, 1994; Hau & Marsh, 2004). As dynamic capabilities view is a recent theoretical advance, still most of the past research is conceptual or qualitative. Covariance Based-SEM techniques are better suited for theory testing while PLS is better suited for theory development (Tobias, 1995). Hence PLS-SEM was selected for testing of structural model.

EFA was conducted for all constructs. Only one factor was extracted as expected in EFA of Organizational dynamic capabilities scale. Factor loadings matrix was acceptable. EFA for all constructs of organizational position indicated that factor loadings matrices were as expected and acceptable.

After verifying that scales represent the underlying latent factors properly, SMARTPLS was used to test the measurement model. After analyzing the table of factor (outer) loadings, t statistics and p value of each indicators, three indicators in measurement scales of environment dynamism and organizational flexibility were dropped due to low loadings and insignificance ($p > 0.05$ level). Although another item of environment dynamism scale did not meet the factor loading of 0.7 threshold, it was retained for further analysis to maintain at least three items per variable criteria (Hair et. al., 2010).

Under the measurement model, internal consistency of measurement or reliability was assessed at two levels, namely item reliability and composite reliability where both reliability values must be greater than 0.7 (Nusair & Hua, 2010). Bagozzi & Yi (1988) & Fornell and Larcker (1981) stated that if AVE is greater than 0.5 that is a necessary condition for convergent validity of the instrument. All AVEs are above 0.5 and composite reliabilities are above 0.7

Table 2

Cronbach alpha, composite reliability and communalities

Variable	Num of items	AVE	Cronbach alpha	Composite Reliability	Commuality
ODC	7	0.6413	0.9047	0.9252	0.6413
RA	3	0.8399	0.9048	0.9403	0.8399
SA	3	0.8348	0.9012	0.9381	0.8348
EDY	3	0.6134	0.5929	0.7835	0.6134
INT	3	0.8024	0.8744	0.9238	0.8024

The existence of discriminant validity was assessed by comparing AVE of each construct with its squared correlation with other constructs in the model (Fornell & Larcker, 1981)

Table 3

Fornell and Larcker criterion for discriminant validity

	EDY	INT	ODC	RA	SA	SC
EDY	0.7831					
INT	0.6547	0.8957				
ODC	0.5492	0.6882	0.8008			
RA	0.4883	0.5334	0.4961	0.9164		
SA	0.2207	0.2119	0.2647	0.2641	0.9136	
SC	0.7141	0.7277	0.6012	0.4413	0.1878	0.7097

The results of the bootstrapping are given in Table 4.

Table 4

Summary of structural model testing

Path	Path Coefficient	Standard Error	t statistics	Significance
ODC>INT	0.695	0.0331	21.025	Sig at 0.001
RA>ODC	0.280	0.0707	3.960	Sig at 0.05
SA>ODC	0.104	0.0641	1.630	Not Significant
EDY>ODC	0.391	0.0677	5.766	Sig at 0.05

7.3 Evaluating the Structural Model (R² Statistics)

It can be seen that reputational assets, organizational flexibility and environment dynamism explain around 38% of the variance in dynamic capabilities while dynamic capabilities

explain about 48% of variance in internationalization. The SMARTPLS output is given in Figure 2.

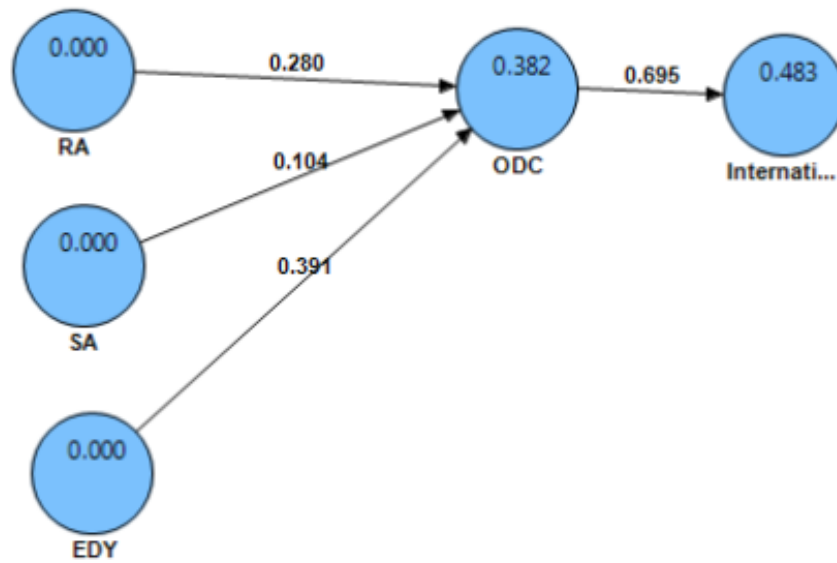


Figure 2. The visual output for SMARTPLS algorithm

Table 5

Summary of hypotheses testing

Hypothesis	Accepted/Rejected
Organizational dynamic capability processes positively influence SME internationalization	Accepted
Reputational assets position of the organization positively influences organizational dynamic capabilities	Accepted
Structural assets position positively influences organizational dynamic capabilities	Rejected
Market assets position positively influences organizational dynamic capabilities	Accepted

The outcome of this research confirms that organizational dynamic capabilities positively influence SME internationalization. This result complies with previous research carried out on the same relationship (Hofer, Niehoff, & Wuehrer, 2015; Samson & Mahmood, 2015; Monferrer, Blesa, & Ripollés, 2014; Villar et al., 2013; Jantunen, Puumalainen, Saarenketo, & Kyläheiko, 2005). More conceptual and theoretical evidence on the relationship between internationalization and dynamic capabilities were put forward by Al-Aali and Teece (2013), Dietmar, Jaeger and Staubmann (2013) and Schweizer, Vahlne and Johanson (2010).

In contrast to the expectation the relationship between organizational flexibility and organizational dynamic capabilities was insignificant. There could be many root causes for this insignificant outcome. Volberda (1997) explains that SME flexibility can be a flexibility due to smallness (A chaotic form of flexibility that is lacking strategic planning). Hence this form of flexibility may be less effective for organization. This research tested structural flexibility. But other forms of flexibilities such as production, employment and market flexibility could have an effect on the relationship (Kekre & Srinivasan, 1990). Further due to

direct ownership participation in most decision making occasions, it is not the extent of formal or control procedures per se that determine the flexibility but also the less number of hierarchical levels which speed up the decision making process. Unlike large organizations, mechanistic structure should not be considered as a hindrance to flexibility of small organizations, if there is a need to change.

A well-developed product reputation helps to develop dynamic capabilities by becoming a VRIN resource (Olavarrieta & Friedmann, 1999; Day & Wensley, 1988; Rindova et al., 2005). The results of this research which implies that reputational assets assist in development of dynamic capabilities comply with these past research.

With respect to environment dynamism and organizational dynamic capabilities, the same result was obtained by many past researchers (Samson & Mahmood, 2015; Wilden & Gudergan, 2014; Barrales-Molina, Bustinza, & Gutiérrez-Gutiérrez, 2013; Li & Liu, 2012; Castiaux, 2012; Protogerou, Caloghirou, & Lioukas, 2012; Barrales-Molina et al., 2010). The outcome of this research does ratify the argument of the scholars who proposed that there is an inextricable link between dynamic capabilities and environment. The government should play the role of international markets sensor through their official bodies and educate the SME owners on the dynamic behavior of the international market. Only once SME owners appreciate the level of market dynamism, they are willing to develop dynamic capabilities which are mandatory in international competition, given that development of dynamic capabilities is costly and purposeful.

8.0 CONCLUSION

The policy makers and SME managers need to support entrepreneurial/innovative cultures of SMEs. Empowerment of employees, less formal control, performance based rewards, recognition for new initiatives, open door policies etc. can inculcate such an entrepreneurial and dynamic culture within the firm. The government should restructure the higher education system and professional education system in such a way the nurture entrepreneurship spirit, international mindset and creativity. Policy makers should encourage SMEs to comply with international regulatory and standards requirements. Some of the practices in these standards such as ISO 9001 and 14001 or other well-known management principles such as kaizen, 5S, JIT etc. actually include processes/best practices that cultivate organizational learning and sensing capabilities.

Future research can expand the research model to include more dimensions for organizational position following Teece et al. (1997) such as technological assets and financial assets. Researchers can use different operationalization definitions available and scales to measure dynamic capabilities. Future researchers are suggested to compare and contrast the tentative model across industry contexts, large and small organizations and countries. Causation path of this model is still in argument in literature. Some research has mentioned that environmental dynamism act as a moderator between dynamic capabilities and performance/internationalization (Jiao, Alon, Kwong & Cui, 2013). Hence the sequence of happenings can be further explored by changing the model constructs.

This study used dynamic capabilities model proposed by Teece et al. (1997) to explain the antecedents of SME internationalization in Sri Lanka. It found that organizational dynamic capabilities positively influences internationalization. It also established that perceptual environmental dynamism and reputational assets positively influences organizational

dynamic capabilities. Structural assets measured as organizational flexibility did not have a significant influence on generation of organizational dynamic capabilities.

9.0 REFERENCES

- Adner, R., & Helfat, C. (2003). Corporate effects and dynamic managerial capabilities. *Strategic Management Journal*, 24, 1011-1125.
- Al-Aali, A., & Teece, D. J. (2013). International entrepreneurship and the theory of the (long-lived) international firm: A capabilities perspective. *Entrepreneurship Theory and Practice*, 38(1), 95–116.
- Ambrosini, V., & Bowman, C. (2009). What are dynamic capabilities and are they a useful construct in strategic management?. *International Journal of Management Review*, 11(1), 29–49.
- Andersson, S., Evers, N., & Kuivalainen, O. (2014). International new ventures: rapid internationalization across different industry contexts. *European Business Review*, 26(5), 390–405.
- Aspelund, A., Madsen, T. K., & Moen, O. (2007). A review of the foundation, international marketing strategies, and performance of international new ventures. *European Journal of Marketing*, 41(12), 1423–1448.
- Autio, E. (2000). Effects of age at entry, knowledge intensity and imitability on international growth. *Academy of Management*, 43(5), 909–924.
- Bagozzi, R., P., & Yi, Y. (1988). On the evaluation of structural equation models. *Journal of the Academy of Marketing Science*, 16 (Spring), 74-94.
- Banalieva, E. R., & Sarathy, R. (2011). A contingency theory of internationalization. *Management International Review*, 51(5), 593–634.
- Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99–120.
- Barrales-Molina, V., Bustinza, Ó. F., & Gutiérrez-Gutiérrez, L. J. (2013). Explaining the causes and effects of dynamic capabilities generation: A multiple-indicator multiple-cause modelling approach. *British Journal of Management*, 24(4), 571–591.
- Blyler, M., & Coff, R. W. (2003). Dynamic capabilities, social capital, and rent appropriation: Ties that split pies. *Strategic Management Journal*, 24(7), 677–686.
- Castiaux, A. (2012). Developing dynamic capabilities to meet sustainable development challenges. *International Journal of Innovation Management*, 16(6), 1–16.
- Cavusgil, S. T., & Knight, G. (2015). The born-global firm: An entrepreneurial and capabilities perspective on early and rapid internationalization. *Journal of International Business Studies*, 46(1), 3–16.
- Chiao, Y. C., Yang, K. P., & Yu, C. M. J. (2006). Performance, internationalization, and firm-specific advantages of SMEs in a newly-industrialized economy. *Small Business Economics*, 26(5), 475–492.
- Coviello, N. (2015). Re-thinking research on born globals. *Journal of International Business Studies*, 46(1), 17-26.
- Coviello, N., McDougall, P., & Oviatt, B. (2011). The emergence, advance and future of international entrepreneurship research - an introduction to the special forum. *Journal of Business Venturing*, 26(6), 625–631.
- Covin, J. G., & Slevin, D. P. (1988). The influence of organization structure on the utility of an entrepreneurial top management style. *Journal of Management Studies*, 25, 217-234.
- Dalberg (2011). *Report on Support to SMEs in Developing Countries through Financial Intermediaries*. Retrieved from http://www.eib.org/attachments/dalberg_sme-briefing-paper.pdf

- Day, G. S., & Wensley, R. (1988). Assessing advantage: An framework for diagnosing competitive superiority. *Journal of Marketing*, 52 (2), 1–20.
- Deelmann, T., & Loos, P. (2002). Trust economy: aspect of reputation and trust building for SMEs in e-business. Proceedings of Eight Americas Conference on Information System, 2213-2221. Retrieved from <http://ais.bepress.com/cgi/viecontent.cgi?article=1661&context=amcis2002>.
- Dunning, J. H. (1988). Paradigm of international the eclectic production: A restatement and some possible extensions. *Journal of International Business Studies*, 19(1), 1–31.
- Eisenhardt, E. M., & Graebner, M. E. (2007). Theory building from cases: Opportunities and challenges. *Academy of Management Journal*, 50(1), 25–32.
- Eisenhardt, K. M., & Martin, J. A. (2000). Dynamic capabilities : What are they? *Strategic Management Journal*, 21(11), 1105–1121.
- Eriksson, T. (2013). Methodological issues in dynamic capabilities research. *Baltic Journal of Management*, 8(3), 306.
- Export Development Board of Sri Lanka (2015). Performance of the export sector of Sri Lanka-2014. Retrieved from [http:// www.srilankanbusiness.com/pdf/performance of export 2014.pdf](http://www.srilankanbusiness.com/pdf/performance_of_export_2014.pdf).
- Falahat, M., Migin, M. W., Chuan, C. S., & Kong, P. F. (2015). Conceptualising the early and rapid internationalising firms. *Procedia - Social and Behavioral Sciences*, 211(September), 612–618.
- Flores, L. G., Zheng, W., Rau, D., & Thomas, C. H. (2010). Organizational learning: Sub-process identification, construct validation, and an empirical test of cultural antecedents. *Journal of Management*, 38(2), 640–667.
- Fornell, C., & Lacker, D.F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18, 39-50.
- Griffin, R., & Ebert, R. (2006). *Business* (8th ed). Texas: Prentice Hall.
- Griffith, D. A., & Harvey, M. G. (2001). A resource perspective of global dynamic capabilities. *Journal of International Business Studies*, 32(3), 597–606.
- Hair Jr., J. F., Black, J. W., Babin, B. J., & Anderson, E. R. (2010). *Multivariate Data Analysis* (7th Ed.). Edinburgh: Pearson Education Limited.
- Hair, J. F., Ringle, C. M., & Sarstedt, M. (2013). Partial least squares structural equation modeling: rigorous applications, better results and higher acceptance. *Long Range Planning*, 46(1-2), 1–12.
- Helfat, C. E., & Peteraf, M. (2009). Understanding dynamic capabilities: progress along a developmental path. *Strategic Organization*, 7(1), 91–102.
- Hofer, K. M., Niehoff, L. M., & Wuehrer, G. A. (2015). The effects of dynamic capabilities on value-based pricing and export performance. *Entrepreneurship in International Marketing*, 25(August), 109–127.
- Hussain, F., Basir, M., & Isa, M. A. (2015). The Mediating Effect of MSMEs Export Performance between Technological Advancement Capabilities and Business. *International Journal of Social, Behavioral, Educational, Economic, Business and Industrial Engineering*, 9(10), 3395
- Jantunen, A., Puumalainen, K., Saarenketo, S., & Kyläheiko, K. (2005). Entrepreneurial orientation, dynamic capabilities and international performance. *Journal of International Entrepreneurship*, 3(3), 223–243.
- Jiao, H., Alon, I., Kwong, C. K., & Cui, Y. (2013). When should organizational change be implemented? The moderating effect of environmental dynamism between dynamic capabilities and new venture performance. *Journal of Engineering and Technology Management*, 30(2), 188–205.

- Johansson, J. K., & Yip, G. S. (1994). Exploiting globalization potential: U.S. and Japanese strategies. *Strategic Management Journal*, 15, 579-601.
- Kazlauskaitė, R., Autio, E., Gelbūda, M., & Šarapovas, T. (2015). The Resource-based view and SME internationalization: An emerging economy perspective. *Entrepreneurial Business and Economics Review*, 3(2), 53-64.
- Keh, H. T., & Xie, Y. (2009). Corporate reputation and customer behavioral intentions: The roles of trust, identification and commitment. *Industrial Marketing Management*, 38(7), 732-742.
- Kelegama S. (2013). Export Sector in Sri Lanka: Issues and Challenges. *Proceedings of 18th AGM of National Chamber of Exporters*. Colombo
- Keupp, M. M., & Gassmann, O. (2009). The past and the future of international entrepreneurship: A review and suggestions for developing the field. *Journal of Management*, 35(3), 600-633.
- Knudsen, T. & Madsen, T. K. (2002). Export strategy: A dynamic capabilities perspective. *Scandinavian Journal of Management*, 18(4), 475-502.
- Korsakienė, R., & Tvaronavičienė, M. (2012). The internationalization of SMEs: An integrative approach. *Journal of Business Economics and Management*, 13(2), 294-307.
- Kuuluvainen, A. (2011). *Dynamic capabilities in the international growth of small and medium-sized firms*. (Doctoral Thesis). University of Turku. Retrieved from http://info.tse.fi/julkaisut/vk/Ae4_2011.pdf
- Kuuluvainen, A. (2012). International growth of a finish high-tech SME: A dynamic capabilities approach, *Journal of Management*, 4(2), 26-40.
- Lanza, A., & Passarelli, M. (2014). Technology change and dynamic entrepreneurial capabilities. *Journal of Small Business Management*, 52(3), 427-450.
- Lawrence, P., & Lorsch, J. (1967). *Organization and Environment*. Cambridge, MA: Harvard.
- Lin, Y., & Wu, L.Y. (2013). Exploring the role of dynamic capabilities in firm performance under the resource-based view framework. *Journal of Business Research*, 67(3), 407-413.
- Lisboa, A., Skarmeas, D., & Lages, C. (2013). Export market exploitation and exploration and performance. Linear, moderated, complementary and non-linear effects. *International Marketing Review*, 30(3), 211-230.
- Luo, Y. (2000). Dynamic capabilities in international expansion. *Journal of World Business*, 35(4), 355-378.
- McAuley, A. (2010). Looking back, going forward: reflecting on research into the SME internationalisation process. *Journal of Research in Marketing and Entrepreneurship*, 12(1), 21-41.
- Nunnally, J. C. (1978). *Psychometric theory* (1st ed.). New York: McGraw-Hill.
- Olavarrieta, S., & Friedmann, R. (1999). Market-oriented culture, knowledge-related resources, reputational assets and superior performance: A conceptual framework. *Journal of Strategic Marketing*, 7(4), 215-228.
- Omar, S., Arokiasamy, L., & Ismail, M. (2009). The background and challenges faced by the small medium enterprises. A human resource development perspective. *International Journal of Business and Management*, 4(10), 95-102.
- Organization for Economic Corporation and Development (2015). OECD Secretary-General Report to the G20 Finance Ministers and Central Bank Governors. Retrieved from <http://www.g20.org/English/Documents/PastPresidency/201512/P020151228376561092279.pdf>
- Pangerl, S. (2013). *Obstacles to SME growth in Peru : an empirical analysis of the effect of labor constraints on firm performance*. (Doctoral Thesis). Georgetown University.

- Peteraf, M. A. (1993). The cornerstones of competitive advantage: A resource-based view. *Strategic Management Journal*, 14(3), 179-191.
- Prange, C., & Verdier, S. (2011). Dynamic capabilities, internationalization processes and performance. *Journal of World Business*, 46(1), 126–133.
- Prashantham, S. (2007). *The Internationalization of Small Firms* (11th ed.). Routledge.
- Protogerou, A., Caloghirou, Y., & Lioukas, S. (2012). Dynamic capabilities and their indirect impact on firm performance. *Industrial and Corporate Change*, 21(3), 615–647.
- Rindova, V., Williamson, I., Petkova, A., Sever, J. (2005). Being good or being known: An empirical examination of the dimensions, antecedents, and consequences of organizational reputation. *Academy of Management Journal*, 48 (6), 1033-1050.
- Ruzzier, M., Hisrich, R. D., & Antoncic, B. (2006). SME internationalization research: Past, present, and future. *Journal of Small Business and Enterprise Development*, 13(4), 476–497.
- Samson, A. T., & Mahmood, R. (2015). The impact of entrepreneurial orientation, reconfiguring capability and moderation of environmental turbulence on export performance of SMEs in Nigeria. *Journal of Economics and Behavioral Studies*, 7(3), 76–87.
- Sapienza, H. J., Autio, E., George, G., & Zahra, S. A. (2006). A capabilities perspective on the effects of early internationalization on firm survival and growth. *Academy of Management Review*, 31(4), 914–933.
- Sapienza, H. J., De Clercq, D., & Sandberg, W. R. (2005). Antecedents of international and domestic learning effort. *Journal of Business Venturing*, 20(4), 437–457.
- Schulz, A., Borghoff, T., & Kraus, S. (2009). International entrepreneurship: Towards a theory of SME internationalization. *International Journal of Business Economics*, 9(1), 1–13.
- Schumacker, R. E., & Lomax, R. G. (2004). *A beginner's guide to structural equation modeling*. Mahwah, NJ: Lawrence Erlbaum.
- Schweizer, R., Vahlne, J. E., & Johanson, J. (2010). Internationalization as an entrepreneurial process. *Journal of International Entrepreneurship*, 8(4), 343–370.
- Shalini, L. S., Rogbeer, S., & Michaelis, B. (2015). The dynamic capabilities perspective: From fragments to meta-theory. *Management Research Review*, 38(7), 662–684.
- Sternad, D., & Jaeger, S. (2013). Dynamic capabilities of resource-poor exporters : A study of SMEs in New Zealand. *Small Enterprise Research*, 20(1), 2–20.
- Sullivan, D. (1994). Measuring the degree of internationalization of a firm. *Journal of International Business Studies*, 25(2), 325–342.
- Tallman, S., & Fladmore-Lindquist, K. (2002). Internationalization, globalization, and capability based strategy. *California Management Review*, 45(1), 116-135.
- Tan, J., & Litschert, R. (1994). Environment–strategy relationship and its performance implications: an empirical study of the Chinese electronic industry. *Strategic Management Journal*, 15, 1–20.
- Teece, D. (2007). Explicating dynamic capabilities: The nature and micro foundations of (sustainable) enterprise performance. *Strategic Management Journal*, 28(August), 12.
- Teece, D. (2014). A dynamic capabilities-based entrepreneurial theory of the multinational enterprise. *Journal of International Business Studies*, 45(1), 8–37.
- Teece, D. (2014). A dynamic capabilities-based entrepreneurial theory of the multinational enterprise. *Journal of International Business Studies*, 45(1), 8–37.
- Teece, D. J. (2006). Reflections on the Hymer thesis and the multinational enterprise. *International Business Review*, 15(2), 124–139.
- Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18, 509–533.

- Telussa, J., Stam, E., & Gibcus, P. (2006). Entrepreneurship, dynamic capabilities and new firm growth. scales research reports, 1–28. Retrieved from <http://ideas.repec.org/p/eim/papers/h200623.html>
- Toulova, M., Votoupalova, M., & Kubickova, L. (2015). Barriers of SMEs internationalization and strategy for success in foreign markets. *International Journal of Management Cases*, 17(1), 4–20.
- Villar, C., Alegre, J., & Pla-Barber, J. (2013). Exploring the role of knowledge management practices on exports: A dynamic capabilities view. *International Business Review*, 23(1), 38–44.
- Volberda, H. W. (1997). Building flexible organizations for fast-moving markets. *Long Range Planning*, 30(2), 169–148.
- Weerawardena, J., Mort, G., Liesch, P., & Knight, G. (2007). Conceptualizing accelerated internationalization in the born global firm: A dynamic capabilities perspective. *Journal of World Business*, 42(3), 294–303.
- Wijesinha A., (2010). *The beginning of the end of cheap labor for Sri Lanka's manufacturing Rivals, Talking Economics*. Retrieved from <http://.ips.lk/talkingeconomics/2010/07/the-beginning-of-end-of-cheap-labour-for-sri-lankas-manufacturing-rivals/> on June 14, 2014.
- Wilden, R., Gudergan, S. P., Nielsen, B. B., & Lings, I. (2013). Dynamic capabilities and performance: Strategy, structure and environment. *Long Range Planning*, 46(1-2), 72–96.
- Winter, S. G. (2003). Understanding dynamic capabilities. *Strategic Management Journal*, 24(10), 991–995.
- Wu, Q., He, Q., & Duan, Y. (2013). Explicating dynamic capabilities for corporate sustainability. *EuroMed Journal of Business*, 8(3), 255-272.
- Zahra, S. A., Ireland, R. D., Hitt, M. A. (2000). International expansion by new venture firms: international diversity, mode of market entry, technological learning, and performance. *Academy of Management Journal*, 43(5), 925–950.
- Zucchella, A., Palamara, G., & Denicolai, S. (2007). The drivers of the early internationalization of the firm. *Journal of World Business*, 42 (3), 268-280.