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# BUSINESS-IT ALIGNMENT EFFECTS ON BUSINESS AGILITY

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**Abstract:**
*The purpose of this study is to examine the effect of business-IT Alignment effects on business agility. The questionnaire of this study was given to 504 people via online survey who work as a manager in 3 public, 9 private and 16 foreign capital banks in Turkey. 334 valid questionnaires were collected back and analyzed. Corellastion, Regresion and Multiple Regretion analysis were used. According to the findings business-IT alignment has a positive effect on the business agility. As sub dimensions intellectual alignment and business alignment have a positive effect on the business agility. When we look at Business –IT alignment effect on business agility dimensions. It has positive effects on all six dimension of business agility (Agile Values, Technology Workforce, Change Management, Collaboration & Coordination and Flexible Infrastructure.).*

**Keywords***: Business-IT Alignment, Business Agility, Banking Sector*



## 1. Introduction

Since many years according to Global Institue for IT Management and Society for Information Management surveys Business - IT Alignment and Business Agility are the top concers of companies. Since Henderson &Venkatraman (1993) first strategic alignment publication,, alignment is still in progress. Because after many years IT- Business relationship, the role of IT was transformed from support function to strategic partnership or business enabler role. Agility was also discribed in the 90s firstly by Goldman as agile manufacturing. Nowadays any effective system must be as agile as its environment forces it to be (Dove, 2005). Agility is the ability to rapidly and thoughtfully respond to changing conditions, moving seamlessly from one position to another. Todays volatile envoirement pushed business become agile not just in manufaturing all part of businesses. Business agility has holistic view different agility perspectives like agile production, agile leadership, agile workforce etc.

These two subjects are closely related but there are limited researches in literature. One of the main question is alignment needs planning, time and effort, agility is required quick decision making. How companies could face these both need in fast changing environmental conditions In this research we would like to define relationship of business- IT alignment effects on business agility in different dimensions. We select finance sector for this research as one of most competitive sector so need agility competence.

## 2. Literature Review

### *2.1 Business – IT Alignment*

According to Broadbent and Weill (1993), strategic business IT alignment represents the extent to which business strategies are enabled, supported, and stimulated by information strategies. (Amaralli, 2014) Strategic alignment is the degree to which a company's mission, goals, and business plans are shared and supported by IT strategy (Chan and Reich, 2007). According to Huang and Hu (2007), IT-business strategic alignment involves active design, management, and execution of the IT functions in accordance with the enterprise's vision, objectives, goals, and the strategies needed to achieve them; it is a basic principle of interaction between IT and business.

Alignment between IT and business strategy enhances business success and enhances the corporate performance (Chan, Sabherwal, & Thatcher, 2006). Moreover, IT-business strategic alignment contributes to higher levels of organizational performance and perceived business value from IT (Chan et al., 1997,Luftman & Brier, 1999; Luftman & Kempaiah, 2007; Silvius et al., 2009, Gerow et al 2014;; Kearns and Sabherwal, 2007; Reich and

Benbasat, 1996, 2000, Sabherwal and Chan, 2001). Bergeron, Raymond, and Rivard (2004) found that the organization that had no conflict in the alignment among business strategies, IT strategies, business operations and IT operations achieved a better performance.( Charoensuk,2014) Tallon and Kreamer (2003) found a significant and positive correlation between IT-business alignment and increased organization performance.There are generally accepted frameworks (CMM, COBIT, ITIL, and others) as a powerful tool for better IT effectiveness and efficiency because they provide a framework for aligning IT and business requirements and strategies. These frameworks are mostly used in organizations and arrange policies and rules for better IT management and IT –Business Alignment. One of the main question of this research is that how effects agility needs of these strict rules of effective business – IT alignment.

The first alignment model is Leavitt`s Diamond that recognizes four mutually interrelated domains: Structure, Task, People and Technology. Another model on organizational harmonization and alignment is the 7-S model created by Peters and Waterman consultants of the McKinsey & Company consulting firm (Peters & Waterman, 1982). The model builds on the premise that there are seven internally interacting domains that need to be aligned in order to increase organizational performance. The elements; the strategy, structure and systems, shared values, the skills, the style and the staff. The MIT90s model developed at MIT by Scott Morton is one of the first business/IT alignment models addressing the fit between business and IT which served as an inspiration for many future model including Henderson and Venkatramans Strategic Alignment Model (Scott Morton, 1991) as well as the MacDonald model (1991). The Strategic Alignment Model (SAM) proposed by Henderson and Venkatraman (1992) and based on the MIT90 investigates four key domains of alignment: business strategy, IT strategy, IS infrastructure and processes, organizational infrastructure and processes. In this model classify the domains into external (business strategy and IT strategy) and internal (IS infrastructure and processes, organizational infrastructure and processes), and analyses several alignment combinations. They conclude that strategic alignment is achieved when strategic and internal domains are aligned, while functional integration is achieved when there is fit between business and IT. They defined four perspectives; Strategy Execution; Technology Transformation; Competitive Potential; Service Level. Papp (1995) extend the model and add four perspectives; Organization IT Infrastructure, IT Infrastructure Strategy, IT Organization Infrastructure, Organization Infrastructure Strategy. He also add four cross domain perspectives as fusion perspectives; Organization strategy fusion; organization infrastructure fusion; Information technology strategy fusion, information technology infrastructure fusion. The authors argue that there isn't a superior alignment perspective but rather they are equally useful so executives should consider all of them when making decisions and be ready to adapt. Avison et al. (2004) adopt SAM framework and use it to empirically test business strategy alignment at the IT project level, by mapping the projects to the framework and then applying the SAM alignment perspectives. In his model, Maes (1999) replace internal domain with a structural level and an operational level and add third dimension on the vertical axis which takes into account the Information and Communication aspects internally and externally. Chan & Huff (1993) examined the relationships among IT strategic alignment, IT effectiveness and business performance and arrange strategic orientation of information systems (STROIS) instrument. Chan & Huff proposed combining Venkatraman's strategic orientation of business enterprise (STROBE) instrument and Chan's strategic orientation of information systems (STROIS) instrument to assess strategic alignment.Luftman (Luftman, 1996, 2007) tried to transform the model into a management tool through the introduction of governing alignment perspectives and identifying enablers and inhibitors to alignment. Tallon and Kraemer's Conceptual Model of Strategic Alignment describes a process of management practices determining a business strategy and an IT strategy. The outcome of the deployment of the business and IS strategies and the resulting strategic alignment has a direct impact on IT business value in the organization.

### *2.2 Business Agility*

"Agility is a way to cope with external and internal changes, which are highly uncertain." (Oosterhaut et al. 2007, p.53) Most recently research accept agility as a mindset. The term "agility" was used for agile manufacturing, the first time by Iaccoca Agency in a report titled as "The Strategy of the Industrialized Specialist Agencies" in 1991 to describe the necessary capability for modern production. (Nagel &Dove, 1991). Business agility is a firm-wide capability to deal with changes that often arise unexpectedly in business environments via rapid and innovative responses that exploit changes as opportunities to grow and prosper (Goldman et al. 1995) After agile manufacturing the concept

was extended to organizational strategic agility, supply chain agility, information systems agility etc. Business agility is the most extended definition of agility cover different agility dimensions. Yusuf, Sarhadi, and Gunasekaran (1999 p.40) define agility as "the successful exploration of competitive bases (speed, flexibility, innovation proactivity, quality and profitability) through the integration of reconfigurable resources and best practices in a knowledge-rich environment to provide customer-driven products and services in a fast changing market environment". Business agility has been defined as a dynamic capability, a higher-order capability, which can enhance the performance over a relatively long time frame by effectively responding to customers' demands. Specifically, as a dynamic capability, organizational agility facilitates integrating and assembling resources, such as assets, knowledge, and relationships (Sambamurthy et al. 2003).

There are many models tried to define agility. Goldman et al (1995) proposed four strategic dimensions of agile competition; enriching the customer, cooperating to enhance competitiveness, mastering change and uncertainty, leveraging the impact of people and information. Agile organizations support it workforce by hiring 'knowledge workers', giving 'top management support and employee empowerment' and continuing 'training and education' development (Gunasekaran, 1999). Sharifi and Zhang (2001 p.498) provided a conceptual model to help production organizations to make strategic decisions for agile production. This model consists agility drivers (Change in market, Change in competition need,change in customer requirements, change in technology, change in social factors), Agility capabilities (Responsiveness,competency, flexibility, quickness), Agility providers (Organization, technology, people, innovation) Zhang in 2011, which has added three more dimensions; involve proactive, customer focus and participation. Kidd (2000) defined two dimension of agility as internal and external agility and firms need to find a balance between internal and external agility. Sensing, responding and learning capabilities can be sourced internally within the organization or externally via partner organizations or customers.

For Lui and Piccol (2006) the agility is defined by: technology, process, people, and structure. Hence, they argue that the agility is not a simple summing of the agility of the four components, but it depends on their nonlinear relationship. Tsourveloudis et al., (2002) proposed four aspects: production infrastructure, market infrastructure, people infrastructure and information infrastructure. Imache et al (2008) proposed four dimensions: Process, Organization, Information, Resource and Environment. Van Oosterhaut et al. (2006), grouped agility enablers into the following six categories: Business Network Governance, Business Network Architecture, Information Technology, Organization Governance, Organization Architecture (processes & products), and Organizational Culture & Personnel. According to Tseng and Lin (2011) are the most important agility drivers that change the competition in business environments are Market, Competition, Customer requirementi technological innovations and social factors.

Dove defined (2001) agile organizations possess three groups of dynamic capabilities for mastering change and uncertainty: sensing, responding, and knowledge management. Sensing is the ability of organizations to actively seek out and gather useable data, assimilate this into information, interpret and analyze the urgency, causes and impact of the derived information and as such, anticipate or detect opportunities and threats in the business environment Responding is the ability of an organization in collaboration with its customers and partners in the business network, to quickly and seamlessly (re)configure combinations of capabilities to shape innovative moves with relative ease (Dove, 2001). Ren et al. (2003) revealed that such competitive bases as speed, proactivity, and flexibility had the largest impact on overall enterprise competitiveness. The study showed that relationships between agility attributes and competitive dimensions had the largest values for following pairs: (1) strategic relationship with customers and speed, (2) quality over product life and costs, (3) product with value addition and quality, (4) firsttime right decision and innovation, (5) enterprise integration and flexibility, and (6) rapid partnership formation and proactivity.

Overby et al. (2006, p.121) have also defined enterprise agility in its broadest sense as the firm's ability to sense environmental change and respond rapidly. Sensing represents the knowledge component of agility. Responding describes the firm's ability to act quickly and accurately on opportunities and/or threats (Dove 2001; Overby et al. 2006). Sense and response explain how firms respond to opportunities and threats with speed, ease and dexterity (Overby et al. 2006). Roberts and Grover (2012)identified that capabilities of sensing and responding themselves do

not lead to competitive advantage, they should be aligned. Galliers (2007) studied the agility in the strategy point of view by suggesting a framework for strategizing agility: (1) the exploitation strategy: concerns the environmental and organizational analysis, the enterprise information and knowledge systems, the standardized procedures and rules, and the information services; (2) the exploration strategy: it is related on the alternative futures of information systems, the existing communities of practice, the flexibility of project teams, the existence of knowledge brokers, and the possibility of cross-project learning; and (3) the change management strategy: it depends on the ability to incorporate the ongoing learning and review. Doz and Kosonen (2008) suggested an organizational model called fast strategy to provide an organizational framework that enables the company to maintain momentum while continuously redirecting and/or reinventing the core business. According to Doz and Kosonen in order to become agile in today's economic markets enterprises must develop three key dimensions within their organizations. Strategic sensitivity; Leadership unity; Resource fluidity. Lu & Ramamurthy(2011) identify two types of organizational agility: market capitalizing agility and operational adjustment agility. Market capitalizing agility refers to a firm's ability to quickly respond to and capitalize on changes through continuously monitoring and quickly improving product/service to address customers' needs. Operational adjustment agility refers to a firm's ability in its internal business processes to physically and rapidly cope with market or demand changes. Park (2011) define the dimensions of the business agility are in three main types. They are sensing agility, decision-making agility and acting agility. Nold &Michel (2015) defined models primary elements are: Systems, leadership and culture. People is the center of this model. People throughout the organization are responsible and want to contribute to making the firm successful. Agile organizations facilitate self-determination, self-control, self-initiative, and responsibility rather than traditional command and control techniques that are rigid, inflexible, and slow reacting. Alberts (2011) has concluded that one way of strengthening agility of an organisation is to establish or improve one or several of the following six components; Responsiveness, Versatility, Flexibility, Resilience, Innovativeness and Adaptability. Williams et al (2013) notice that agility is not just the ability to change. It is a cultivated capability that enables an organization to respond in a timely, effective, and sustainable way when changing circumstances require it.

There is not an accepted measurement model for agility. Dove (1994) presented one of the first discussions on the measurement of business agility and developed a set of metrics comprising cost, time, quality, and scope to measure the overall agility of an enterprise. Kumar and Motwani (1995) developed a strategic framework to systematically evaluate an organization's effectiveness within the dimensions of agility. Sharifi and Zhang (2001) presented a scoring model also enabled the identification of strengths and weaknesses of agile dimensions practiced by the organization. Yang and Li (2002) proposed a procedure to assess agility using a multi-grade fuzzy approach. Tsourveloudis and Valavanis (2002) performed an agility assessment by focusing on the agility perspectives, namely direct, knowledge-based and holistic. The agility focuses on all the levels of the firm as well as the various driving factors of agility, such as infrastructure, production, market, people and information. Arteta and Giachetti (2004) proposed a different and novel approach to use complexity as a surrogate measure for agility. This is a newer approach for assessing complexity. Vinodh et al. (2008) designed a tool for scoring approach for measuring agility and quantifying agility in organizations. Vinodh et al. (2010) did their agility assessment using combined scoring and multi-grade fuzzy approaches for the agility assessment. Lin and Tseng (2006) stated, "The fuzzy agility evaluation (FAE) frameworks composed of two major parts" The parts are 'agility capabilities' and 'agility drivers'. Ganguly et al. (2009) used three metrics to measure agility. The metrics are 'market share', 'responsiveness' and 'cost effectiveness'. Another evaluation framework is defined by Worley & Lawler (2009). This framework centers on four features robust strategy', 'an adaptable organization design', 'shared leadership', and 'change capability'. Izza et al. (2008) proposed POIRE methodology for the measurement of the agility and durability of enterprise information systems. POIRE refers to the five aspects of an enterprise information system: Process, Organization, Information, Resources and Environment. Lui and Picolli (2007) studied the IT agility in a socio technical perspective. The social sub-system encompasses the people who are directly involved in the IT and reporting the structure in which, these people are embedded. To measure the IT agility using the socio-technical perspective; the authors use the agility of the four components: (i) technology agility, (ii) process agility, (iii) people agility and (iv) structure agility. Because of dimensions dont have linear relationships they purpose, associate *weights* for each dimension in order to evaluate the overall agility of the IT. Sidky's Agility Measurement Index (or SAMI) is a tool developed by Sidky (2007). This framework is a mix between qualitative and quantitative research, where the researcher transforms qualitative

answers into quantitative. He used according to the agile principles: "Embrace change to deliver customer value", "Plan and deliver software frequently", "Human-centric", "Technical excellence", and "Customer collaboration" of the agile manifesto. Overby et al. (2006) suggested that the enterprise agility should be measured as a function of its sensing and responding capabilities. These two capabilities of sensing and responding should be measured individually and separately and then combined to get the actual agility assessment. Pahlke et al (2011) arrange an measurement model and merge different agility dimensions. In his measurement model sensing and responding capabilities of enterprises should be measured in three different layers; market agility,network agility and operational agility. Shaarabh (2014 p.3) review existing measurement models and state that a problem related with all these model is lack of sufficient data from different organization to set a reference. Although models have covered various aspects varying from organization structure to performance outcome to measure agility need for a universal index is needed in order to set a reference point and to check the validity of models in varied field of applications. Thus due to this shortcoming it is very difficult to choose the most appropriate model for agility evaluation.

### *2.3 Alignment and Agility*

According to Luftman ( 2003, 2006) an important moderating factor in the relationship between IT capabilities and business agility is business-IT alignment (Van Oosterhout, 2010, p.7). Luftman and Ben-Zvi(2011, p.212) noticed that business executives are rethinking the role of IT, and are expecting IT and business leaders to work closely together to improve business productivity, reduce business expenses via business process re-engineering, and increase business agility and speed-to-market. Haes & Grembergen (2008) notice that business – IT alignment requires the firm to utilize organizational knowledge and expertise inherent in the employees from both IT and business department to manage the dynamic environment (Bi et al, 2014, p.4).

The objective of planning IT strategically is to align it with overarching corporate goals and business requirements and make it agile enough to deal with constant change in the company and its environment (Hanschke 2010, p. 7) Tallon (2008) points at the managerial IT capabilities that lead to the development of technical IT capabilities associated with agile IT infrastructure, which in turn drives business agility or a firm's ability to react to change in its products and markets.(Van Oosterhout, 2010, p.7) Srinivasan (2009) identified stake alignment as one of the four key organizational enablers for enterprise agility. Tallon and Pinsonneault (2011) explain, organizations are building business-IT alignment in a way to become more agile in anticipation of unforeseen market changes. This finding indicates that the value of business-IT alignment is in preparing organizations for change.

Tallon and Pinsonneault (2011) was summarize two competing perspective of Business-IT alignment and agility. Alignment facilitates agility or impedes agility. Strategic Business-IT Alignment as facilitates by improving shared understanding, knowledge sharing and shared language for describing IT. In resource based perspective alignment accept IT as key business enabler and this allows resource allocation in urgent change needs, innovation and adaptation. The resulting alignment between IT and business strategy can enable agility since essential changes in business strategy can be easily communicated to IT executives while the potential for IT-led capabilities to redirect business strategy can be shared with business executives. In this way, the path dependencies and routines provided by alignment can enable increased adaptiveness and innovation (He and Wong 2004; Lavie and Rosenkopf 2006; Zahra and George 2002).

Motadel (2014 p.895) tested Luftmans's SAMM model dimensions on agility and defined that regarding the communications axis, workplace flexibility to increase interaction, sharing knowledge and close relation with customers and suppliers (by having enough information) have higher priorities in assessing the strategic alignment for agility. From competencies axis, connecting the processes, services, supplier, users Continuous controlling and monitoring the services/ products and processes quality (by using controlling information systems and managerial dashboards) and Changing the training basis and continuous learning have higher priorities in assessing the strategic alignment for agility. From architecture axis, Flexibility in the organizational business strategies, Shorter time to meet the information needs (by using network infrastructures and web based programs), Production and development of

modular flexible information systems, have higher priorities in assessing the strategic alignment for agility. From partnership axis, Applying IT in promoting knowledge, skill and business field activities (e.g. knowledge management systems and electronic and virtual systems), Flexibility in rapid forming the IT field partnership with business for changing, have higher priorities in assessing the strategic alignment for agility. From governance axis, Network architecture and inter and intra organizational information systems integrity, Correct decision making by using information sources (content information systems, knowledge management systems, decision making management systems), have higher priorities in assessing the strategic alignment for agility. From The ability to identify the business goals in proportion to the needed changes (by using monitoring systems and managerial dashboards) have higher priorities in assessing the strategic alignment for agility.

Tallon(2011) also summarize opposite opinion that alignment impedes agility in two ways. Matured shared understand and knowledge sharing can foster behavioral initeria, tunnel vission etc. And it may obstruct take actions against change needs. In meanwhile alignment calls long term resource commitment that is opposite of basics of agility. Alignment-induced exploitation and exploration of key organizational resources encounter competency traps that slow the rate of innovation and responsiveness to change ((Andriopoulos and Lewis 2009; Gupta et al. 2006; He and Wong 2004; Attaran (2004) found that IT to be the biggest barrier to rapid and radical change, because radical change required IT redesign. Hard-wired IT architectures where business rules are embedded into the information systems are a major impediment to rapid movement. Such architectures are expensive to maintain and have difficulties to support smaller, incremental modifications to business practices (Hagel and Brown, 2003). Chen et al.(2010) Alignment can lead to stagnation, strategic inflexibility, and competitive disadvantage.(Gerow 2014 (pp.1160) Consequently, some argue alignment may result in too rigid a firm, where tight links between business and IT restrict the firm's ability to recognize change, reduces its strategic flexibility, and inhibits its ability to respond to environmental change (e.g., Benbya and McKelvey 2006). This view suggests some firms find themselves in a "rigidity trap" because the alignment process is too time-consuming, costly, and formal to enable quick responses to changing market conditions (Chen et al. 2010). This problem becomes most apparent in firms that too narrowly customize IT systems to meet current strategic needs, resulting in an inflexible infrastructure that does not reflect standards and is costly to update

Oosterhout (2010) has added the third perspective claims that IT capabilities on tribute to higher levels of business agility, but only under certain conditions for certain events. The effects of IT capabilities on business agility and business performance are mainly indirect and mediated by sensing, responding and learning (Overby et al., 2006). AT Kearney consulting firm survey (2005) showed that IT departments within larger organizations are perceived as not being very agile and being unresponsive. The benefits of IT Infrastructure agility are lagged, because new applications that leverage new infrastructure take time to deploy, and important organizational factors such as time for learning and decision-making governance mediate their implementation and use (Aral and Weill, 2007). Main obstacles found are legacy IT, too much complexity in the IT architecture, a lack of integration between business and IT (i.e. insufficient Business-IT alignment) and differences in views between business and IT leaders on the importance of IT and the timing of new technology adoption. The complexity of heterogeneous IT infrastructure and applications prevents IT organizations from developing and deploying new systems quickly to support business agility requirements (Reddy and Reddy, 2002). Gerow (2014 p.1162) notice that some researchers have found environmental turbulence does not always influence alignment (e.g., Kearns and Lederer 2004; Teo and King 1997), while others revealed environmental uncertainty resulted in different levels of alignment (e.g., Choe 2003; Kearns and Lederer 2004; Wang et al. 2011).

Literature also agrees that the firm's agility is influenced by the extent of fit between IT and business processes (Lee 2004). This indicates that the foundation of the firm's agility is to make use of IT alignment to develop a unique operational capability. Business-IT alignment provides direction and organizational flexibility to allow business to respond to environmental threats and opportunities (Avison et al. 2004). Lee (2013) notice that consistent with dynamic capability thinking and environmental dynamism, posited that an alternative and more applicable perspective on alignment study could be based on the notion of strategic ambidexterity. Ambidexterity suggests that strategy planning should result in the organization being simultaneously able to explore new capabilities and to exploit cur-

rent capabilities (Lee, 2013). Sambamurthy, Bharadwaj, and Grover (2003) characterized this strategic positioning as agility. The researchers stated, "both strategic processes and agility are dynamic capabilities that impact the ability of firms to launch many and varied competitive actions and that, in turn, these competitive actions are a significant antecedent of firm performance" (p. 238)(Ness, 2016,p.49).

Talloon et al (2011) notice that alignment has no direct effect on firm performance. It is significant as indicated when they consider agility the madiation effects. This means that alignment is positively associated with performance but only insofar as alignment helps agility and agility, in turn, contributes to higher firm performance. As a result of analysis reveals that alignment has a positive and significant effect on agility. Chung et al. (2003) find a strong correlation between IT infrastructure agility and strategic IT-Business alignment. They conclude that the IT strategy must be tightly aligned with the organizational strategy in order for IT infrastructures to be able to facilitate business agility. This close alignment means that IT infrastructures need to be agile, because agility of the IT infrastructure allows the company to develop new processes and applications quickly, which enables business agility. Bergeron et al. (2004) propose that conflicting co-alignment patterns of business strategy, business structure, IT strategy and IT structure will exhibit lower levels of business performance. Research of Tallon and Kraemer (2004) demonstrates that firms in high clock speed industries, such as electronics, financial services, or telecommunications have a significantly harder time in achieving alignment between IT and the business strategy than firms in a low clock speed industry, such as construction and chemicals. From flexibility perspective, Duncan (1995) has identified three core elements to be worked with to improve IT Infrastructure flexibility. These are 1) the alignment of IT plans to business objectives, 2) information technology plans or architecture, and 3) the skills of all personnel involved in IT resource management. As seen he defined business –IT alignment is one of element of IT flexility.

Tapanainen et al. (2008) identify close relationship between IT and business management is key function of IT agility. IT-business alignment can be key for organisational agility as it can quickly mobilise resources enabling distributed, virtual and ad-hoc work environments (Seo and La Paz, 2008). The continuous knowledge sharing that takes place in IT-Business aligned organizations between IT and business leaders is seen as an important factor in sensing changes, threats and opportunities in the business environment before deciding on a joint response (Preston and Karahanna, 2009). Queiroz (2013) has found that in Strategic Business Unit (SBU) level that multi-level IT alignment is a key enabler of SBU agility. He also found that multi-level IT alignment facilitates SBU business-IT alignment, which in turn also enhances SBU agility.

Yousif (2015) suggest that a business aligned IT organization contributing positively to business agility should have the following properties and characteristics.

1. The IT leadership actively participates in business strategy and planning with senior business leaders (Rockart et al., 1996; Glaser, 2008; Melarkode et al., 2004)
2. Business and IT executives collaborate on setting strategic goals for IT (Tallon, 2008)
3. The IT function has dedicated teams/individuals proactively and regularly engaging with business (Melarkode et al., 2004; Prager, 1996)
4. The IT function maintains an up-to-date picture of business priorities and how it can contribute to them (Melarkode et al., 2004)
5. The IT function proactively works across the business to identify and drive new opportunities for value creation through IT (Melarkode et al., 2004; Rockart et al., 1996)
6. The business units own and drive IS/IT enabled business cases in close collaboration with the IT function (Melarkode et al., 2004)
7. The business units own and drive IS/IT enabled improvement projects in close collaboration with the IT function (Melarkode et al., 2004)
8. The IT leadership is concerned and cares about the same things as the leadership of business (Prager, 1996)
9. The IT leadership does well in demonstrating the strategic role of IT in meeting the

organization's overall objectives (Melarkode et al., 2004)
10. The leadership of business fully understands the strategic role of IT and how IT can add business value (Prager, 1996)

Specifically, a firm with better IT alignment is good at sensing market changes and making flexible decisions through collaboration between IT and business department. IT alignment can enable organizational agility since essential changes in business operations demand can be easily communicated to IT professionals while the potential for IT-led capabilities to redirect business operations can be shared with people working in business department (Tallon & Pinsonneault 2011). This kind of collaboration can help catch new IT and market opportunities thus achieving rapid speed of responsiveness (Sambamurthy et al. 2003). (Bi et al, 2014, p.5) Oosterhaut (2010) mentioned that agility is related with Sense-Response-Learning capabilities. In Enterprise Artictecture perspective he defined that two types of alignment that explain business agility performance. SRL alignment refers to the maturity, balance and relationship between sensing, responding and learning (IT) capabilities. Business-IT alignment refers to the alignment between business and IT and the alignment between the different layers of the enterprise architecture. As a result a lack of integration may hinder information flows within a firm and with business partners, harming its overall business agility performance. Major conflicts can be caused by the existence of legacy systems and the integration of information systems or components as part of a heterogeneous IT landscape, common to many firms. This leads to low levels of connectivity and standardization, limited data transparency and many connections between components and applications, yielding high levels of complexity. As a result, IT can have various conflicting effects on an organization's level of business agility, depending on the IT agility level of specific information systems or components of the IT infrastructure.

Galliers(2006) defined IT systems should somehow align with an organization's business strategy and addressed number of problems. One such relates to the dynamic nature of an organization's business environment and the consequent need for flexible or agile IT. A second issue relates to our inability to foresee the future and the changing business information requirements that will come with it. A third issue relates to the role that information can play in informing agile responses to changing circumstances and imperatives a proactive, rather than reactive, role for IT.

## *3. Measures and Sampling*

The questionnaire of this study was given to 504 people via online survey who work as a manager in 3 public, 9 private and 16 foreign capital banks in Turkey. 334 valid questionnaires were collected back and analyzed. First of all, demographic questions were asked to the participants to collect information about their ages, genders, marital statuses, educational levels, work experiences in the company and in their careers, working part of company Business Unit or IT. Additionally agile project management maturity of company was checked by four questions to understand agile project management and business agility maturity. The Business-IT Alignment scale used in this study was developed by Henderson & Venkatram SAM (Strategic Alignment Model) and re-interpreted by Gerow (2015). This model consisted of 38 items and measure six alignment of company that define alignment between four dimensions of company (Business Strategy, IT Strategy, Organizational Infrastructure and Process and IT Infrastructure and Process to measure). Six type of the scale are as follows: Intellectual Alignment, Operational Alignment, Business Alignment, IT alignment and two Cross Domains: Business Strategy vs IT Infrastructure and IT strategy vs Business Infrastructure and process. The Business agility scale which consists of 45 items and 3 dimensions and 6 sub dimensions to measure maturity levels of business agility (Wendler, 2014). Three main and six sub dimensions of the scale are as follows: Agility Prerequisites (Agile Values, Technology), Agility of People (Workforce, Management of Change), Structure Enhancing Agility ( Collaboration and coordination, Flexible Structure). The both scale were translated into Turkish. Both scales are designed as 5-point Likert scales and items are scoNot Supported as follows: 1: Strongly Disagree, 2: Disagree, 3: Undecided, 4: Agree, 5: Strongly Agree. Most of the employees were between the ages of 31-40, males, had associate or bachelor degrees, total work experiences of 16+years in their careers and 0-5 years in the company.

## *4. Hypotheses and Conceptual Model*

The conceptual model of the study is shown in Figure 1. Table 2 shows the hypotheses of the study.

**Table 2.** Hypotheses

| | |
|---|---|
| $H_1$ | IT-Business Alignment affects Business Agility positively. |
| $H_{1a}$ | IT-Business Alignment Intellectual Alignment affects Business Agility positively. |
| $H_{1b}$ | IT-Business Alignment Operational Alignment affects Business Agility positively. |
| $H_{1c}$ | IT-Business Alignment Business Strategy vs IT Infra Alignment affects Business Agility positively. |
| $H_{1d}$ | IT-Business Alignment IT Strategy vs Business Infra Alignment affects Business Agility positively. |
| $H_{1e}$ | IT-Business Alignment IT Alignment affects Business Agility positively. |
| $H_{1f}$ | IT-Business Alignment Business Alignment affects Business Agility positively. |
| $H_2$ | IT-Business Alignment affects Agile Values positively. |
| $H_3$ | IT-Business Alignment affects Technology positively. |
| $H_4$ | IT-Business Alignment affects Workforce positively. |
| $H_5$ | IT-Business Alignment affects Change Management positively. |
| $H_6$ | IT-Business Alignment affects Cooperation & Coordination positively. |
| $H_7$ | IT-Business Alignment affects Flexible Infrastructure positively. |
| $H_8$ | Intellectual Alignment affects Agile Values positively. |
| $H_9$ | Operational Alignment affects Agile Values positively. |
| $H_{10}$ | Business Strategy vs IT Infra Alignment affects Agile Values positively. |
| $H_{11}$ | IT Strategy vs Business Infra Alignment affects Agile Values positively. |
| $H_{12}$ | IT Alignment affects Agile Values positively. |
| $H_{13}$ | Business Alignment affects Agile Values positively. |
| $H_{14}$ | Intellectual Alignment affects Technology positively. |
| $H_{15}$ | Operational Alignment affects Technology positively. |
| $H_{16}$ | Business Strategy vs IT Infra Alignment affects Technology positively. |
| $H_{17}$ | IT Strategy vs Business Infra Alignment affects Technology positively. |
| $H_{18}$ | IT Alignment affects Technology positively. |
| $H_{19}$ | Business Alignment affects Technology positively. |
| $H_{20}$ | Intellectual Alignment affects Workforce Agility positively. |
| $H_{21}$ | Operational Alignment affects Workforce Agility positively. |
| $H_{22}$ | Business Strategy vs IT Infra Alignment affects Workforce Agility positively. |
| $H_{23}$ | IT Strategy vs Business Infra Alignment affects Workforce Agility positively. |
| $H_{24}$ | IT Alignment affects Workforce Agility positively. |
| $H_{25}$ | Business Alignment affects Workforce Agility positively. |
| $H_{26}$ | Intellectual Alignment affects Change Management positively. |
| $H_{27}$ | Operational Alignment affects Change Management positively. |
| $H_{28}$ | Business Strategy vs IT Infra Alignment affects Change Management positively. |
| $H_{29}$ | IT Strategy vs Business Infra Alignment affects Change Management positively. |
| $H_{30}$ | IT Alignment affects Change Management positively. |
| $H_{31}$ | Business Alignment affects Change Management positively. |
| $H_{32}$ | Intellectual Alignment affects Cooperation & Coordination positively. |
| $H_{33}$ | Operational Alignment affects Cooperation & Coordination positively. |
| $H_{34}$ | Business Strategy vs IT Infra Alignment affects Cooperation & Coordination positively. |
| $H_{35}$ | IT Strategy vs Business Infra Alignment affects Cooperation & Coordination positively. |
| $H_{36}$ | IT Alignment affects Cooperation & Coordination positively. |
| $H_{37}$ | Business Alignment affects Cooperation & Coordination positively. |
| $H_{38}$ | Intellectual Alignment affects Flexible Infrastructure positively. |
| $H_{39}$ | Operational Alignment affects Flexible Infrastructure positively. |

| | |
|---|---|
| $H_{40}$ | Business Strategy vs IT Infra Alignment affects Flexible Infrastructure positively. |
| $H_{41}$ | IT Strategy vs Business Infra Alignment affects Flexible Infrastructure positively. |
| $H_{42}$ | IT Alignment affects Flexible Infrastructure positively. |
| $H_{43}$ | Business Alignment affects Flexible Infrastructure positively. |

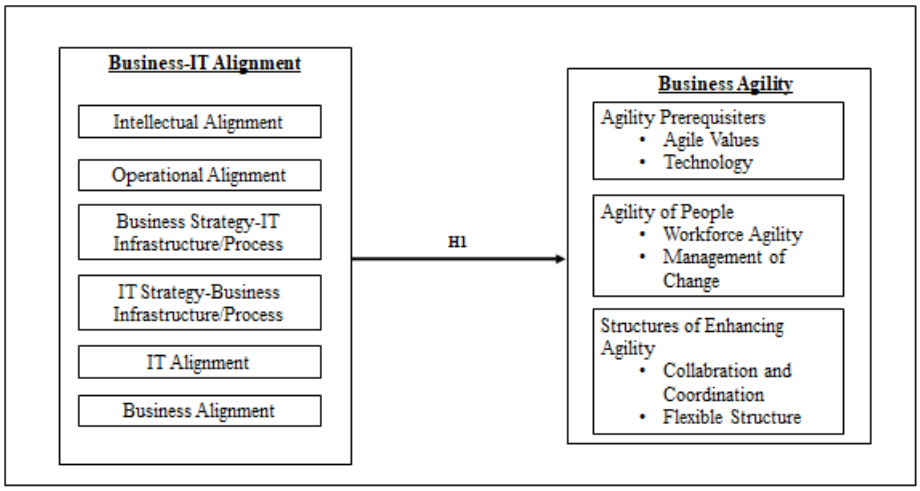


**Figure 1**. Conceptual Model

### *4.1. Descriptive Statistics*

The findings of the descriptive statistics are presented in Table

**Table 2. Descriptive Statistics for Business –IT Alignment**

| | Mean | Std. Deviation | Variance | Skewness (Std. Error: 0,133) | Kurtosis (Std. Error: 0,266) |
|---|---|---|---|---|---|
| 1. Our IT strategies support our business strategies (IA1) | 3,728 | 0,770 | 0,594 | -0,439 | -0,009 |
| 1. Our IT strategies and business strategy match each other (IA2) | 3,627 | 0,767 | 0,588 | -0,253 | -0,240 |
| 1. We adapt our IT strategy to business strategic change (IA3) | 3,654 | 0,808 | 0,652 | -0,559 | 0,563 |
| 1. Our IT strategies align with our business' strategic plan (IA4) | 3,651 | 0,808 | 0,653 | -0,583 | 0,572 |
| 1. We assess the strategic important of emerging technologies (IA5) | 3,701 | 0,896 | 0,803 | -0,632 | 0,358 |
| 1. We adapt our IT goals and objectives to our business goals and objectives (IA6) | 3,624 | 0,790 | 0,625 | -0,395 | -0,036 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1. | We identify the fit between our IT-related strategic opportunities and our business's strategic directions (IA7) | 3,603 | 0,830 | 0,689 | -0,536 | 0,305 |
| 1. | Our IT strategies and business strategies correspond to each other (IA8) | 3,513 | 0,931 | 0,867 | -0,655 | 0,154 |
| 2. | Our IT processes support our business processes (OA1) | 3,636 | 0,777 | 0,604 | -0,499 | 0,310 |
| 2. | We adapt our IT processes to our business processes (OA2) | 3,627 | 0,775 | 0,600 | -0,333 | 0,196 |
| 2. | Our IT processes and business processes match each other (OA3) | 3,576 | 0,815 | 0,664 | -0,548 | 0,354 |
| 2. | We identify the fit between our IT infrastructure and our business infrastructure (OA4) | 3,528 | 0,803 | 0,645 | -0,546 | 0,317 |
| 2. | Our IT infrastructure and business infrastructure correspond to each other (OA5) | 3,490 | 0,854 | 0,730 | -0,663 | 0,448 |
| 2. | Our IT infrastructure aligns with our business infrastructure (OA6) | 3,543 | 0,803 | 0,644 | -0,596 | 0,369 |
| 3. | Our IT processes support our business strategies (CAa1) | 3,636 | 0,753 | 0,568 | -0,766 | 1,088 |
| 3. | We adapt our internal IT processes to our business strategies (CAa2) | 3,576 | 0,700 | 0,490 | -0,247 | -0,127 |
| 3. | Our business strategies and internal IT processes match each other (CAa3) | 3,582 | 0,753 | 0,567 | -0,366 | -0,183 |
| 3. | We identify the fit between our business-related strategic opportunities and our IT infrastructure (CAa4) | 3,582 | 0,769 | 0,591 | -0,556 | -0,146 |
| 3. | Our IT infrastructure and business strategies correspond to each other (CAa5) | 3,499 | 0,781 | 0,610 | -0,754 | 0,775 |
| 3. | Our IT infrastructure aligns with our business strategies (CAa6) | 3,594 | 0,771 | 0,595 | -0,534 | 0,277 |
| 4. | Our IT strategies support our business processes (CAb1) | 3,639 | 0,737 | 0,543 | -0,217 | -0,173 |
| 4. | We adapt our IT strategies to our internal business processes (CAb2) | 3,624 | 0,751 | 0,565 | -0,365 | -0,122 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 4. | Our externally-focused IT strategies and internal business processes match each other (CAb3) | 3,552 | 0,775 | 0,601 | -0,582 | 0,172 |
| 4. | We identify the fit between our IT-related strategic opportunities and our business infrastructure (CAb4) | 3,525 | 0,788 | 0,621 | -0,638 | 0,420 |
| 4. | Our business infrastructure and IT strategies correspond to each other (CAb5) | 3,487 | 0,829 | 0,688 | -0,638 | 0,345 |
| 4. | Our business infrastructure aligns with our externally-focused IT strategies (CAb6) | 3,522 | 0,796 | 0,633 | -0,540 | -0,016 |
| 5. | Our IT processes support our IT strategies (ITA1) | 3,681 | 0,772 | 0,595 | -0,522 | 0,432 |
| 5. | We adapt our IT strategies to our internal IT processes (ITA2) | 3,663 | 0,760 | 0,577 | -0,624 | 0,558 |
| 5. | Our IT strategies and internal IT processes match each other (ITA3) | 3,675 | 0,757 | 0,573 | -0,753 | 0,721 |
| 5. | We identify the fit between our IT-related strategic opportunities and our IT infrastructure (ITA4) | 3,606 | 0,782 | 0,611 | -0,545 | 0,256 |
| 5. | Our IT infrastructure and IT strategies correspond to each other (ITA5) | 3,546 | 0,799 | 0,638 | -0,702 | 0,428 |
| 5. | Our IT infrastructure aligns with our IT strategies (ITA6) | 3,633 | 0,758 | 0,574 | -0,603 | 0,482 |
| 6. | Our business processes support our business strategies (BA1) | 3,618 | 0,768 | 0,590 | -0,461 | 0,301 |
| 6. | We adapt our business strategies to our internal business processes (BA2) | 3,660 | 0,776 | 0,602 | -0,602 | 0,438 |
| 6. | Our business strategies and internal business processes match each other (BA3) | 3,591 | 0,772 | 0,596 | -0,720 | 0,770 |
| 6. | We identify the fit between our business-related strategic opportunities and our business infrastructure (BA4) | 3,561 | 0,763 | 0,582 | -0,533 | 0,243 |
| 6. | Our business infrastructure and business strategies correspond to each other (BA5) | 3,519 | 0,833 | 0,693 | -0,750 | 0,735 |
| 6. | Our business infrastructure aligns with our business strategies (BA6) | 3,552 | 0,817 | 0,667 | -0,600 | -0,028 |

(n):334 (1) Completely Disagree … (5) Completely Agree

| | Mean | Std. Deviation | Variance | Skewness (Std. Error: 0,133) | Kurtosis (Std. Error: 0,266) |
|---|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| 1.Our organization values a culture that harnesses change for competitive advantages. | 3,851 | 0,805 | 0,648 | -0,830 | 1,070 |
| 1.Our organization values a culture that considers team work as integral part. | 3,931 | 0,814 | 0,663 | -0,878 | 1,339 |
| 1.Our organization values a culture that accepts and supports decisions and proposals of employees. | 3,570 | 0,844 | 0,713 | -0,432 | 0,261 |
| 1.Our organization values a culture that is supportive of experimentation and the use of innovative ideas. | 3,764 | 0,913 | 0,833 | -0,585 | 0,254 |
| 1.Our organization values a culture that considers changing customer-related requirements as opportunities. | 3,893 | 0,816 | 0,665 | -0,566 | 0,355 |
| 1.Our organization prefers a proactive continuous improvement rather than reacting to crisis or "fire-fighting". | 3,594 | 0,887 | 0,787 | -0,585 | 0,444 |
| 1.Our organization prefers market-related changes (e. g. new competitors, preferences) to generate news opportunities. | 3,675 | 0,931 | 0,867 | -0,675 | 0,323 |
| 2.Our organization has IT that make organizational information easily accessible to all employees. | 3,487 | 0,858 | 0,736 | -0,116 | -0,636 |
| 2.Our organization has IT that provide information helping our employees to quickly respond to changes. | 3,484 | 0,818 | 0,670 | -0,409 | -0,215 |
| 2.Our organization has ITthat are appropriate to our needs and allow us to be competitive in the marketplace. | 3,579 | 0,871 | 0,759 | -0,627 | 0,297 |
| 2.Our organization has ITenable decentralization in decision making. | 2,949 | 0,922 | 0,851 | -0,152 | -0,312 |
| 2.Our organization has IT are integrated amongst different departments and/or business units. | 3,472 | 0,814 | 0,663 | -0,460 | 0,103 |
| 2.Our organization has ITare standardized or comparable amongst different departments and/or business units. | 3,251 | 0,839 | 0,703 | -0,225 | -0,475 |
| 3.Our employees are able to act with a view to continuou improvement of our products, services, processes, and/o | 3,648 | 0,743 | 0,552 | -0,737 | 0,712 |

| | | | | | |
|---|---|---|---|---|---|
| working methods. | | | | | |
| 3.Our employeesare able to sense, perceive, or anticipate the best opportunities which come up in our environment. | 3,403 | 0,751 | 0,565 | -0,433 | -0,115 |
| 3.Our employees are able to meet the levels of product and/or service quality demanded by our customers. | 3,707 | 0,708 | 0,501 | -0,839 | 1,249 |
| 3.Our employees use a broad range of skills and can be applied to other tasks when needed. | 3,558 | 0,805 | 0,649 | -0,692 | 0,767 |
| 3.Our employees communicate with each other with trust, goodwill, and esteem. | 3,821 | 0,772 | 0,597 | -0,700 | 0,867 |
| 3.Our employees are ready to learn and are prepaNot Supported to constantly access, apply and update knowledge. | 3,725 | 0,828 | 0,685 | -0,598 | 0,566 |
| 3.Our employeesare in general always willing to continuously learn from one another and to pass their knowledge to others. | 3,528 | 0,911 | 0,831 | -0,693 | 0,561 |
| 3.Our employees obtain and develop appropriate technological capabilities purposeful. | 3,576 | 0,800 | 0,640 | -0,780 | 0,899 |
| 3.Our employees can re-organize continuously in different team configurations to meet changing requirements and the newly arising challenges. | 3,442 | 0,767 | 0,589 | -0,263 | -0,030 |
| 3.Our employees are self-motivated. | 3,272 | 0,852 | 0,725 | -0,464 | 0,086 |
| 3.Our employees take responsibility and think in a business-like manner. | 3,543 | 0,814 | 0,662 | -0,593 | 0,630 |
| 4.Our managers maintain an informal management style with focus on coaching and inspiring people. | 3,239 | 0,980 | 0,961 | -0,494 | -0,119 |
| 4.Our managers understand the value of IT investments from a company-wide perspective. | 3,496 | 0,935 | 0,873 | -0,717 | 0,462 |
| 4.Our managers have the knowledge and skills necessary to manage change. | 3,570 | 0,919 | 0,845 | -0,720 | 0,514 |
| 4.Our managers are able to quickly implement changes in products and/or services. | 3,579 | 0,840 | 0,706 | -0,816 | 1,185 |

| | | | | | |
|---|---|---|---|---|---|
| 4.Our managers are able to recognize future competitive advantages that may result from innovations in products, services, and/or processes. | 3,567 | 0,896 | 0,803 | -0,668 | 0,345 |
| 4.Our managers are able to flexibly deploy their resources (material, financial, human, . . . ) to make use of opportunities and minimize threats. | 3,427 | 0,899 | 0,808 | -0,874 | 0,727 |
| 4.Our managers manage the sharing of information, know-how, and knowledge among employees appropriately.A32 | 3,278 | 0,971 | 0,944 | -0,561 | -0,033 |
| 5.In our organization, we jointly and intensively operate throughout different functions and/or departments for strategic decision making. | 3,588 | 0,821 | 0,674 | -0,513 | 0,325 |
| 5.In our organization, we encourage early involvement of several departments and/or functions in new product and/or service development. | 3,496 | 0,840 | 0,706 | -0,656 | 0,146 |
| 5.In our organization, we inform ourselves systematically about information technology innovations. | 3,510 | 0,844 | 0,712 | -0,500 | 0,018 |
| 5.In our organization, we strategically invest in appropriate technologies and have a clear vision how IT contributes to business value. | 3,558 | 0,887 | 0,786 | -0,592 | 0,136 |
| 5.In our organization, wemonitor the performance of our partners and subcontractors very closely. | 3,493 | 0,931 | 0,867 | -0,683 | 0,094 |
| 5.In our organization, weselect our partners and subcontractors by quality criteria (rather than pure cost-based decisions). | 3,570 | 0,951 | 0,904 | -0,665 | 0,160 |
| 5.In our organization, we align all our activities to customer requirements and needs. | 3,642 | 0,846 | 0,716 | -0,855 | 0,773 |
| 5.In our organization, we encourage compilation and internal dissemination of information on customers needs. | 3,558 | 0,816 | 0,667 | -0,786 | 0,702 |
| 5.In our organization, we closely collaborate with and encourage fast feedback from our customers. | 3,660 | 0,832 | 0,692 | -0,830 | 0,616 |

| | | | | | |
|---|---|---|---|---|---|
| 6.In our organization, we scan and examine our environment systematically to anticipate change. | 3,555 | 0,802 | 0,643 | -0,532 | 0,034 |
| 6.In our organization, we react to approaching changes by immediately updating our business strategy. | 3,600 | 0,797 | 0,636 | -0,438 | -0,075 |
| 6.In our organization, we react to approaching changes by immediately updating our processes. | 3,496 | 0,854 | 0,730 | -0,450 | 0,059 |
| 6.In our organization, we are quick to make appropriate decisions in the face of market- and/or customer-related changes. | 3,493 | 0,875 | 0,766 | -0,517 | 0,173 |
| 6.In our organization, we change authorities when tasks change. | 3,546 | 0,930 | 0,865 | -0,259 | -0,418 |

(n):334 (1) Completely Disagree … (5) Completely Agree

### *4.2.Reliability Analyses*

Table :Reliability Test Table

| Scales and Dimensions | Cronbach's Alpha | Number of Statements |
|---|---|---|
| Model Reliability | 0,990 | 83 |
| Business –IT Alignment | 0,989 | 38 |
| Intellectual Alignment(IA) | 0,927 | 8 |
| Operational Alignment(OA) | 0,911 | 6 |
| Cross Domain(CAa) | 0,977 | 6 |
| Cross Domain(CAb) | 0,981 | 6 |
| IT Alignment(ITA) | 0,916 | 6 |
| Business Alignment(BA) | 0,921 | 6 |
| Business Agility | 0,980 | 45 |
| Agile Values | 0,921 | 7 |
| Technology | 0,933 | 6 |
| Workforce | 0,911 | 11 |
| Change Management | 0,983 | 7 |
| Collobration&Coordination | 0,936 | 9 |
| Flexible Infrasturcture | 0,923 | 5 |

**Factor Analyses**

The findings of the factor analyses are presented in Table 5 and Table 6

| Factors | Statements | Factor Loading | Cronbach Alpha | % Variance Explained |
|---|---|---|---|---|
| *Intellectual Alignment* | 1. Our IT strategies align with our business' strategic plan (IA4) | 0.780802965 | 0.912 | 21.788 |
| | 1. Our IT strategies support our business strategies (IA1) | 0.780091658 | | |
| | 1. We adapt our IT strategy to business strategic change (IA3) | 0.77557602 | | |
| | 1. Our IT strategies and business strategy match each other (IA2) | 0.770932396 | | |
| | 1. Our IT strategies and business strategies correspond to each other (IA8) | 0.644623572 | | |
| | 1. We adapt our IT goals and objectives to our business goals and objectives (IA6) | 0.636185092 | | |
| | 1. We identify the fit between our IT-related strategic opportunities and our business's strategic directions (IA7) | 0.632466183 | | |
| *Business Alignment* | 6. Our business strategies and internal business processes match each other (BA3) | 0.734 | 0.913 | 20.631 |
| | 6. We identify the fit between our business-related strategic opportunities and our business infrastructure (BA4) | 0.730 | | |
| | 6. Our business infrastructure and business strategies correspond to each other (BA5) | 0.710 | | |

| | | | | |
|---|---|---|---|---|
| | 6. Our business processes support our business strategies (BA1) | 0.674 | | |
| | 6. We adapt our business strategies to our internal business processes (BA2) | 0.672 | | |
| | 6. Our business infrastructure aligns with our business strategies (BA6) | 0.657 | | |
| *IT Alignment* | 5. Our IT strategies and internal IT processes match each other (ITA3) | 0.686 | 0.919 | 16.612 |
| | 5. We identify the fit between our IT-related strategic opportunities and our IT infrastructure (ITA4) | 0.655 | | |
| | 5. We adapt our IT strategies to our internal IT processes (ITA2) | 0.645 | | |
| | 4. Our IT processes support our IT strategies (ITA1) | 0.636 | | |
| | 5. Our IT infrastructure and IT strategies correspond to each other (ITA5) | 0.632 | | |
| | 5. Our IT infrastructure aligns with our IT strategies (ITA6) | 0.608 | | |
| *Operational Alignment* | 2. We identify the fit between our IT infrastructure and our business infrastructure (OA4) | 0.673 | 0.916 | 14.835 |
| | 2. Our IT processes and business processes match each other (OA3) | 0.671 | | |
| | 2. Our IT infrastructure aligns with our business infrastructure (OA6) | 0.669 | | |
| | 2. We adapt our IT processes to our business processes (OA2) | 0.637 | | |

| | | | | |
|---|---|---|---|---|
| | 2. Our IT processes support our business processes (OA1) | 0.634 | | |
| | 2. Our IT infrastructure and business infrastructure correspond to each other (OA5) | 0.599 | | |
| *Cross Domain IT Infrastructure& Business Strategy* | 3. Our IT infrastructure aligns with our business strategies (CAa6) | 0.658 | 0.908 | 8.646 |
| | 3. We identify the fit between our business-related strategic opportunities and our IT infrastructure (CAa4) | 0.559 | | |
| | 3. Our IT processes support our business strategies (CAa1) | 0.540 | | |
| *Cross Domain IT Strategy & Business Infrastructure* | 4. We adapt our IT strategies to our internal business processes (CAb2) | 0.589 | 0.921 | 3.055 |
| | 4. Our externally-focused IT strategies and internal business processes match each other (CAb3) | 0.546 | | |
| | 4. Our business infrastructure aligns with our externally-focused IT strategies (CAb6) | 0.515 | | |
| Total Variance Explained | | | | 85.567 |
| Kaiser-Meyer-OlkinMeasure of SamplingAdequacy. | | | | 0.963 |
| Approx. Chi-Square | | | | 15527.768 |
| Df | | | | 496 |
| Sig. | | | | 0.000 |
| RotationMethod: VarimaxwithKaiserNormalization. | | | | |

There are six dimensions of business-IT alignment scale in Table 5. A KMO value which is 0.963 points out that the sample size is appropriate for the factor analysis. A high Chi-Square value and 0.000 sig. value show that the data has a normal distribution. The six dimensions explain 85.567% of the business-IT alignment. Intellectual alignment 21.788%, business alignment %20,631, IT alignment %16,612, operational alignment %14,835, Cross Domain IT Infrastructure& Business Strategy %14,835 and Cross Domain IT Strategy & Business Infrastructure %3,055.

| Factors | Statements | Factor Loading | Cronbach Alpha | % Variance Explained |
|---|---|---|---|---|
| *Change Management* | 4.Our managers have the knowledge and skills necessary to manage change. | 0.737 | 0.934 | 16.078 |
| | 4.Our managers manage the sharing of information, know-how, and knowledge among employees appropriately. | 0.707 | | |
| | 4.Our managers are able to recognize future competitive advantages that may result from innovations in products, services, and/or processes. | 0.702 | | |
| | 4.Our managers understand the value of IT investments from a company-wide perspective. | 0.699 | | |
| | 4.Our managers are able to flexibly deploy their resources (material, financial, human, . . . ) to make use of opportunities and minimize threats. | 0.694 | | |
| | 4.Our managers are able to quickly implement changes in products and/or services. | 0.669 | | |
| | 4.Our managers maintain an informal management style with focus on coaching and inspiring people. | 0.667 | | |
| *Technology* | 2.Our organization has IT are integrated amongst different departments and/or business units. | 0.686 | 0.913 | 13.931 |
| | 2.Our organization has ITthat are appropriate to our needs and allow us to be competitive in the marketplace. | 0.656 | | |
| | 2.Our organization has ITare standardized or comparable amongst different departments and/or business units. | 0.626 | | |
| | 2.Our organization has IT that make organizational information easily accessible to all employees. | 0.610 | | |
| | 2.Our organization has IT that provide information helping our employees to quickly respond to changes. | 0.606 | | |
| *Agile Values* | 1.Our organization values a culture that harnesses change for competitive advantages. | 0.714 | 0.909 | 13.083 |
| | 1.Our organization values a culture that considers team work as integral part. | 0.707 | | |
| | 1.Our organization values a culture that considers changing customer-related requirements as opportunities. | 0.679 | | |
| | 1.Our organization values a culture that is supportive of experimentation and the use of innovative ideas. | 0.652 | | |
| | 1.Our organization values a culture that accepts and supports decisions and proposals of employees. | 0.616 | | |
| | 1.Our organization prefers market-related changes (e. g. new competitors, preferences) to generate news opportunities. | 0.605 | | |
| | 1.Our organization prefers a proactive continuous improvement rather than reacting to crisis or "fire- | 0.588 | | |

| | | | | |
|---|---|---|---|---|
| | fighting". | | | |
| *Collobration&Cooperation* | 5.In our organization, we monitor the performance of our partners and subcontractors very closely. | 0.675 | 0.912 | 11.430 |
| | 5.In our organization, we align all our activities to customer requirements and needs. | 0.670 | | |
| | 5.In our organization, we closely collaborate with and encourage fast feedback from our customers. | 0.637 | | |
| | 5.In our organization, we select our partners and subcontractors by quality criteria (rather than pure cost-based decisions). | 0.626 | | |
| | 5.In our organization, we strategically invest in appropriate technologies and have a clear vision how IT contributes to business value. | 0.565 | | |
| | 5.In our organization, we encourage compilation and internal dissemination of information on customers needs. | 0.549 | | |
| *Workforce* | 3.Our employees are ready to learn and are prepaNot Supported to constantly access, apply and update knowledge. | 0.692 | 0.923 | 10.296 |
| | 3.Our employeesare in general always willing to continuously learn from one another and to pass their knowledge to others. | 0.677 | | |
| | 3.Our employees communicate with each other with trust, goodwill, and esteem. | 0.676 | | |
| | 3.Our employees can re-organize continuously in different team configurations to meet changing requirements and the newly arising challenges. | 0.662 | | |
| | 3.Our employees use a broad range of skills and can be applied to other tasks when needed. | 0.637 | | |
| *Flexible Infrastructure* | 6.In our organization, we react to approaching changes by immediately updating our business strategy. | 0.646 | 0.906 | 6.643 |
| | 6.In our organization, we react to approaching changes by immediately updating our processes. | 0.615 | | |
| | 6.In our organization, we are quick to make appropriate decisions in the face of market- and/or customer-related changes. | 0.553 | | |
| Total Variance Explained | | | | 71.461 |
| Kaiser-Meyer-OlkinMeasure of SamplingAdequacy. | | | | 0.953 |
| Approx. Chi-Square | | | | 11168.48 |
| Df | | | | 666 |

| | |
|---|---|
| Sig. | 0.000 |

There are six dimensions of business agility scale in Table . A KMO value which is 0.953 points out that the sample size is appropriate for the factor analysis. A high Chi-Square value and 0.000 sig. value show that the data has a normal distribution. The six dimensions explain 71.461% of the business agility. Change Management 16.078%, Technology %13,931, Agile Values %13.083, Collobration&Coordination %11,430, Workforce %10,296 and Flexible Infrastructure %6,643

### *4.3 Correlation Analysis*

| | Intellectual Alignment (IA) | Operational Alignment(OA) | Cross Domain(CAa | Cross Domain (CAb | IT Alignment(ITA) | Business Alignment(BA) | Alignment | Agile Vakues | Technology | Workforce | Change Management | Collobration&Coordination | Flexible Infrasturcture | Business Agility |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Intellectual Alignment(IA) | 1 | | | | | | | | | | | | | |
| Operational Alignment(OA | 0,826** | 1 | | | | | | | | | | | | |
| Cross Domain(CAa | 0,854** | 0,872** | 1 | | | | | | | | | | | |
| Cross Domain(CAb | 0,809** | 0,834** | 0,865** | 1 | | | | | | | | | | |
| IT Alignment(ITA | 0,789** | 0,847** | 0,879** | 0,869** | 1 | | | | | | | | | |
| Business Alignment(BA) | 0,769** | 0,842** | 0,847** | 0,874** | 0,890** | 1 | | | | | | | | |
| Alignment | 0,901** | 0,933** | 0,949** | 0,938** | 0,942** | 0,933** | 1 | | | | | | | |
| Agile Values | 0,679** | 0,579** | 0,623** | 0,549** | 0,582** | 0,600** | **0,645**** | 1 | | | | | | |
| Technology | 0,653** | 0,660** | 0,659** | 0,644** | 0,655** | 0,657** | **0,702**** | 0,690** | 1 | | | | | |
| Workforce | 0,618** | 0,620** | 0,603** | 0,632** | 0,637** | 0,632** | **0,669**** | 0,669** | 0,733** | 1 | | | | |
| Change Management | 0,674** | 0,615** | 0,614** | 0,633** | 0,626** | 0,654** | **0,682**** | 0,735** | 0,703** | 0,753** | 1 | | | |
| Collobration&Coordination | 0,722** | 0,701** | 0,656** | 0,662** | 0,668** | 0,677** | **0,730**** | 0,758** | 0,713** | 0,730** | 0,741** | 1 | | |
| Flexible Infrasturcture | 0,654** | 0,591** | 0,644** | 0,619** | 0,611** | 0,687** | **0,680**** | 0,707** | 0,719** | 0,661** | 0,686** | 0,691** | 1 | |
| Business Agility | **0,765**** | **0,719**** | **0,726**** | **0,715**** | **0,722**** | **0,747**** | **0,785**** | **0,870**** | **0,868**** | **0,867**** | **0,887**** | **0,886**** | **0,854**** | 1 |

**. Correlation is significant at the 0.01 level (2-tailed).

There is a significant positive relationship between the between the dimensions of the business-IT alignment and the business agility at the 0.01 level

### *4.4 Regression Analysis*

**Model Summary[b]**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics | | | | | Durbin-Watson |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | R Square Change | F Change | df1 | df2 | Sig. F Change | |
| 1 | 0,785[a] | 0.616 | 0.615 | 0.39070 | 0.616 | 535.297 | 1 | 333 | 0.000 | 1.999 |

Dependent Variable:Business Agility, Independent Variable: Alignment

**ANOVA[a]**

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 81.710 | 1 | 81.710 | 535.297 | ,000[b] |
| | Residual | 50.830 | 333 | .153 | | |
| | Total | 132.540 | 334 | | | |

a. Dependent Variable: Business Agility

b. Predictors: (Constant), Alignment

H1: IT-Business Alignment affects Business Agility positively.
Alignment Coefficient of variable is 0,785. H1 is accepted at less than 0.05 significance level

### *4.5 Multiple Regression Analysis*

**Model ((Aligment subdimesions effects on business agility)**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics | | | | | Durbin-Watson |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | R Square Change | F Change | df1 | df2 | Sig. F Change | |
| 1 | 0,805 | 0,648 | 0,642 | 0,37706 | 0,648 | 100,703 | 6 | 328 | 0,000 | 2,037 |

a.Predictors: Aligment Sub dimensions
b. Dependent Variable: Agility

Alignment subdimensions explain business agility at %64.80. F is 100.703 and significance is 0.000

**Multiple Regression Analysis Table**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 0,862 | 0,113 | | 70,597 | 0,000 |
| | Intellectual Alignment(IA) | 0,404 | 0,059 | 0,462 | 6,837 | 0,000 |
| | Operational Alignment(OA) | 0,029 | 0,066 | **0,034** | 0,446 | **0,656** |

| | | | | | |
|---|---|---|---|---|---|
| Cross Domain(CAa) | -0,035 | 0,080 | **-0,039** | -0,442 | **0,658** |
| Cross Domain(CAb) | -0,019 | 0,070 | **-0,022** | -0,268 | **0,789** |
| IT Alignment(ITA) | 0,051 | 0,077 | **0,058** | 0,669 | **0,504** |
| Business Alignment(BA) | 0,318 | 0,072 | 0,364 | 4,402 | 0,000 |

Dependent Variable: Business Agility

Intellectual and Business alignment have less than 0.05 significance level. So H1a and H1f is supported.

**Model (Aligment subdimesions effects on agile value)**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | R Square Change | F Change | df1 | df2 | Sig. F Change |
| 1 | 0,702 | 0,492 | 0,483 | 0,50126 | 0,492 | 52,996 | 6 | 328 | 0,000 |

Alignment subdimensions explain agile values at %49.20.

**Multiple Regression Analysis Table**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 1,231 | 0,151 | | 8,169 | 0,000 |
| | Intellectual Alignment(IA) | 0,568 | 0,079 | 0,588 | 7,234 | 0,000 |
| | Operational Alignment(OA) | -0,098 | 0,087 | -0,104 | -1,127 | 0,261 |
| | Cross Domain(CAa) | 0,162 | 0,106 | 0,163 | 1,525 | 0,128 |
| | Cross Domain(CAb) | -0,272 | 0,093 | **-0,282** | -2,914 | 0,004 |
| | IT Alignment(ITA) | 0,012 | 0,102 | 0,012 | 0,119 | 0,905 |
| | Business Alignment(BA) | 0,322 | 0,096 | 0,333 | 3,357 | 0,001 |

Dependent Variable: Agile Values

**Model (Aligment subdimesions effects on Technology)**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | R Square Change | F Change | df1 | df2 | Sig. F Change |
| 1 | 0,705 | 0,497 | 0,488 | 0,49419 | 0,497 | 54,095 | 6 | 328 | 0,000 |

Alignment subdimensions explain Techmology at %49.70.

**Multiple Regression Analysis Table**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 0,840 | 0,149 | | 5,655 | 0,000 |
| | Intellectual Alignment(IA) | 0,227 | 0,077 | 0,237 | 2,929 | 0,004 |
| | Operational Alignment(OA) | 0,137 | 0,086 | 0,146 | 1,594 | 0,112 |
| | Cross Domain(CAa) | 0,047 | 0,104 | 0,048 | 0,454 | 0,650 |
| | Cross Domain(CAb) | 0,028 | 0,092 | 0,030 | ,307 | 0,759 |
| | IT Alignment(ITA) | 0,105 | 0,100 | 0,108 | 1,046 | 0,296 |
| | Business Alignment(BA) | 0,181 | 0,095 | 0,189 | 1,913 | 0,057 |

Dependent Variable: Technology

**Model ( Aligment subdimesions effects on workforce)**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | R Square Change | F Change | df1 | df2 | Sig. F Change |
| 1 | 0,678 | 0,459 | 0,449 | 0,51165 | 0,459 | 46,411 | 6 | 328 | 0,000 |

Alignment subdimensions explain workforce at %45.90.

**Multiple Regression Analysis Table**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 1,133 | 0,154 | | 7,360 | 0,000 |
| | Intellectual Alignment(IA) | 0,238 | 0,080 | 0,249 | 2,968 | 0,003 |
| | Operational Alignment(OA) | 0,107 | 0,089 | 0,114 | 1,201 | 0,231 |
| | Cross Domain(CAa) | -0,162 | 0,108 | -0,165 | -1,498 | 0,135 |
| | Cross Domain(CAb) | 0,144 | 0,095 | 0,151 | 1,509 | 0,132 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | IT Alignment(ITA) | 0,204 | 0,104 | 0,211 | 1,966 | 0,040 |
| | Business Alignment(BA) | 0,158 | 0,098 | 0,165 | 1,609 | 0,109 |

Dependent Variable: Workforce

**Model ( Alignment Subdimensions on Change Management)**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | R Square Change | F Change | df1 | df2 | Sig. F Change |
| 1 | 0,710 | 0,505 | 0,496 | 0,56094 | 0,505 | 55,681 | 6 | 328 | 0,000 |

Alignment subdimensions explain change management at %50.50.

**Multiple Regression Analysis Table**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 0,499 | 0,169 | | 2,958 | 0,003 |
| | Intellectual Alignment(IA) | 0,523 | 0,088 | 0,477 | 5,943 | 0,000 |
| | Operational Alignment(OA) | -0,018 | 0,098 | -0,017 | -0,189 | 0,850 |
| | Cross Domain(CAa) | -0,193 | 0,118 | -0,172 | -1,631 | 0,104 |
| | Cross Domain(CAb) | 0,067 | 0,105 | 0,062 | 0,644 | 0,520 |
| | IT Alignment(ITA) | 0,061 | 0,114 | 0,055 | 0,536 | 0,592 |
| | Business Alignment(BA) | 0,378 | 0,107 | 0,345 | 3,520 | 0,000 |

Dependent Variable: Change Management

**Model ( Alignment Subdimensions on Collabration&Coordination)**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | R Square Change | F Change | df1 | df2 | Sig. F Change |
| 1 | 0,758 | 0,574 | 0,566 | 0,47775 | 0,574 | 73,642 | 6 | 328 | 0,000 |

Alignment subdimensions explain change management at %55.40.

**Multiple Regression Analysis Table**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 0,709 | 0,144 | | 4,938 | 0,000 |
| | Intellectual Alignment(IA) | 0,474 | 0,075 | 0,471 | 6,326 | 0,000 |
| | Operational Alignment(OA) | 0,250 | 0,083 | 0,254 | 3,005 | 0,003 |
| | Cross Domain(CAa) | -0,240 | 0,101 | -0,233 | -2,381 | 0,018 |
| | Cross Domain(CAb) | 0,005 | 0,089 | 0,005 | 0,057 | 0,954 |
| | IT Alignment(ITA) | 0,096 | 0,097 | 0,095 | 0,993 | 0,322 |
| | Business Alignment(BA) | 0,212 | 0,092 | 0,210 | 2,313 | 0,021 |

Dependent Variable: Collabration&Coordination

**Model ( Alignment Subdimensions on Flexible Infrastructure)**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | R Square Change | F Change | df1 | df2 | Sig. F Change |
| 1 | 0,726 | 0,527 | 0,518 | 0,51458 | 0,527 | 60,808 | 6 | 328 | 0,000 |

Alignment subdimensions explain Flexible Infrastructure at %52.70.

**Multiple Regression Analysis Table**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 0,756 | 0,155 | | 4,886 | 0,000 |
| | Intellectual Alignment(IA) | 0,395 | 0,081 | 0,384 | 4,899 | 0,000 |
| | Operational Alignment(OA) | -0,202 | 0,090 | -0,201 | -2,252 | 0,025 |
| | Cross Domain(CAa) | 0,175 | 0,109 | 0,166 | 1,612 | 0,108 |
| | Cross Domain(CAb) | -0,085 | 0,096 | -0,083 | -0,889 | 0,375 |
| | IT Alignment(ITA) | -0,171 | 0,105 | -0,165 | -1,639 | 0,102 |
| | Business Alignment(BA) | 0,657 | 0,099 | 0,639 | 6,663 | 0,000 |

Dependent Variable: Flexible Infrastructure

### *4.6 Results*

| | | |
|---|---|---|
| $H_1$ | IT-Business Alignment affects Business Agility positively. | Supported |
| $H_{1a}$ | IT-Business Alignment Intellectual Alignment affects Business Agility positively. | Supported |
| $H_{1b}$ | IT-Business Alignment Operational Alignment affects Business Agility positively. | Not Supported |
| $H_{1c}$ | IT-Business Alignment Business Strategy vs IT Infra Alignment affects Business Agility pos | Not Supported |
| $H_{1d}$ | IT-Business Alignment IT Strategy vs Business Infra Alignment affects Business Agility pos | Not Supported |
| $H_{1e}$ | IT-Business Alignment IT Alignment affects Business Agility positively. | Not Supported |
| $H_{1f}$ | IT-Business Alignment Business Alignment affects Business Agility positively. | Supported |
| $H_2$ | IT-Business Alignment affects Agile Values positively. | Supported |
| $H_3$ | IT-Business Alignment affects Technology positively. | Supported |
| $H_4$ | IT-Business Alignment affects Workforce positively. | Supported |
| $H_5$ | IT-Business Alignment affects Change Management positively. | Supported |
| $H_6$ | IT-Business Alignment affects Cooperation & Coordination positively. | Supported |
| $H_7$ | IT-Business Alignment affects Flexible Infrastructure positively. | Supported |
| $H_8$ | Intellectual Alignment affects Agile Values positively. | Supported |
| $H_9$ | Operational Alignment affects Agile Values positively. | Not Supported |
| $H_{10}$ | Business Strategy vs IT Infra Alignment affects Agile Values positively. | Not Supported |
| $H_{11}$ | IT Strategy vs Business Infra Alignment affects Agile Values positively. | Supported |
| $H_{12}$ | IT Alignment affects Agile Values positively. | Not Supported |
| $H_{13}$ | Business Alignment affects Agile Values positively. | Supported |
| $H_{14}$ | Intellectual Alignment affects Technology positively. | Supported |
| $H_{15}$ | Operational Alignment affects Technology positively. | Not Supported |
| $H_{16}$ | Business Strategy vs IT Infra Alignment affects Technology positively. | Not Supported |
| $H_{17}$ | IT Strategy vs Business Infra Alignment affects Technology positively. | Not Supported |
| $H_{18}$ | IT Alignment affects Technology positively. | Not Supported |
| $H_{19}$ | Business Alignment affects Technology positively. | Not Supported |
| $H_{20}$ | Intellectual Alignment affects Workforce Agility positively. | Supported |
| $H_{21}$ | Operational Alignment affects Workforce Agility positively. | Not Supported |
| $H_{22}$ | Business Strategy vs IT Infra Alignment affects Workforce Agility positively. | Not Supported |
| $H_{23}$ | IT Strategy vs Business Infra Alignment affects Workforce Agility positively. | Not Supported |
| $H_{24}$ | IT Alignment affects Workforce Agility positively. | Supported |
| $H_{25}$ | Business Alignment affects Workforce Agility positively. | Not Supported |
| $H_{26}$ | Intellectual Alignment affects Change Management positively. | Supported |
| $H_{27}$ | Operational Alignment affects Change Management positively. | Not Supported |
| $H_{28}$ | Business Strategy vs IT Infra Alignment affects Change Management positively. | Not Supported |
| $H_{29}$ | IT Strategy vs Business Infra Alignment affects Change Management positively. | Not Supported |
| $H_{30}$ | IT Alignment affects Change Management positively. | Not Supported |
| $H_{31}$ | Business Alignment affects Change Management positively. | Supported |
| $H_{32}$ | Intellectual Alignment affects Cooperation & Coordination positively. | Supported |
| $H_{33}$ | Operational Alignment affects Cooperation & Coordination positively. | Supported |
| $H_{34}$ | Business Strategy vs IT Infra Alignment affects Cooperation & Coordination positively. | Supported |
| $H_{35}$ | IT Strategy vs Business Infra Alignment affects Cooperation & Coordination positively. | Not Supported |
| $H_{36}$ | IT Alignment affects Cooperation & Coordination positively. | Not Supported |
| $H_{37}$ | Business Alignment affects Cooperation & Coordination positively. | Supported |

| | | |
|---|---|---|
| $H_{38}$ | Intellectual Alignment affects Flexible Infrastructure positively. | Supported |
| $H_{39}$ | Operational Alignment affects Flexible Infrastructure positively. | Supported |
| $H_{40}$ | Business Strategy vs IT Infra Alignment affects Flexible Infrastructure positively. | Not Supported |
| $H_{41}$ | IT Strategy vs Business Infra Alignment affects Flexible Infrastructure positively. | Not Supported |
| $H_{42}$ | IT Alignment affects Flexible Infrastructure positively. | Not Supported |
| $H_{43}$ | Business Alignment affects Flexible Infrastructure positively. | Supported |

## 5. Conclusion and Discussion

This study found out that the business-IT alignment has a positive effect on the business agility. As sub dimensions intellectual alignment and business alignment have a positive effect on the business agility. When we look at Business –IT alignment effect on business agility dimensions. It has positive effects on all six dimension of business agility ( Agile Values, Technology Workforce, Change Management, Collaboration & Coordination and Flexible Infrastructure.). Intellectual alignment and business alignment has a positive effect on agile value. Cross domain IT strategy-Business Infrastructure has a negative impact on agile values. IT Infrastructure has not effect on Agile Values. Intellectual Alignment has positive effect on Technology. Technology effected by strategy, infrastructure is a result. Intellectual alignment and IT alignment has a positive effect on workforce. These results confirm that IT alignment is a enabler for business agility. Interesting point is that business alignment has not an effect on workforce. Intellectual alignment and business alignment has a positive effect on change management. Intellectual alignment, operational and cross domain business strategy-IT Infrastructure has a positive effect on collaboration & coordination. Aligned strategies and aligned infrastructure has a positive impact. On the other hand business strategy supported by IT Infrastructure has an positive impact on collaboration. . Intellectual alignment, operational and business alignment have a positive effect on flexible infrastructure. This result show that IT Infrastruce has not an effect on flexible infrastructure. Business infrastructure has more effect than IT infrastructure. The results show that strategic level alignment (Intellectual Alignment) has positive effect on business agility, especially business strategy. Business or IT infrastructure has limited effect. One interesting point is that there is no significant difference in business agility scores between companies that use agile project management or not using. This mean reason could be companies perception of their business agility and be aware of the needs of agility. On the other hand if agile project management is used just in IT departments, business agility is higher than both IT and business usage and just business departments usage. This may related with agile project management maturity in business departments. Highest business agility scores difference seen 3-6 years agile project period. In next years business agility score changes are limited. In specific to the banking sector, results show that strategical alignment needed for business agility. The main question is that how they will become dynamic and stabile in highly competitive, tightly regulative sector that push quality, security and cost efficiency.

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