

The Effect of Organizational Culture to Business Transformation Mediated by Technology Adoption

Sulaiha Beevi Athambawa

Senior Lecturer

South Eastern University of Sri Lanka

macsulai@seu.ac.lk

Abstract: The main objective of this survey is to examine the business transformation of organizations in the rice milling industry in the Ampara District of Sri Lanka facilitated through the adoption of new technologies. While the opportunities for transformation and growth have increased manifold, the rice milling industry in the district has not shown any signs of exploiting these opportunities to their potential. This phenomenon was clearly visible in the rice manufacturing sector which is one of the key industries in the Ampara district of Eastern Province, Sri Lanka. Technologies can play a main role on transforming any businesses, but that entails technology adoption at the right time in the right manner. Drawing on the results of the literature survey, a conceptual model was proposed and the factor that contributes to the adoption of technologies leading to business transformation was identified. Organizational culture was measured through degree of innovativeness, developing standard institutional behaviors, create cross-cultural and corporate culture This research was designed to be carried out in quantitative analysis using mainly a questionnaire survey to collect data from a sample of 77 rice millers in the district. The analysis revealed that Organizational Culture has a significant effect on technology adoption, while technology adoption also has a significant effect on business transformation among them. At the same time, organizational culture has no significant effect on business transformation. Further, it revealed that technology adoption mediates the effect of organizational culture on business transformation. It is recommended to rice millers to focus on increasing the degree of innovativeness, developing standard institutional behaviors, create cross-cultural and corporate culture in the business. The issue of improving technology through developing organizational culture remains a challenging task for agro business managers in the rice processing sector in Ampara district of Eastern province, Sri Lanka.

Keyword: Organizational Culture, Technology Adoption, Business Transformation.

I. INTRODUCTION BACKGROUND

An organization is a vehicle to introduce one or many technologies into society. Using technology can vary from basic to super-high level. Reference [3] stressed the transformation to change the fundamental paradigms that stimulated growth by changing the core values underlying business from financial gain to balanced values. All industries are under pressure to change, and each organization needs a plan to handle the changes. The first talent, partners and resources are chosen for those who can overcome the challenge of optimizing both physical and digital components by introducing new customer-based business models.

Business transformation is a management initiative that achieves by more closely aligning an organization's people, process and technology initiation with its business strategies and vision to support and help coordinate new business strategies and meet long-term goals [14]. This can be achieved by introducing new technologies, enhancing business models and improving management practices. Reference [19] looked at the transformation of the business from different perspectives, such as process, people, technology, or performance. For most organizations today, transformation and change therefore are a critical issue. It can be an essential part of the competitive business environment in the way that global challenges are addressed.

Technology plays a central role in new organizational designs, facilitating coordination between loosely federated components, overcoming spatial and temporal barriers and promoting flexibility in

organization. Proposing a set of IT and applications that match the transitional business' need for efficiency, local responsiveness, and learning capability [17]. Technology has the ability to enable dramatic organizational transformation and to outmoded traditional forms in various business sectors including agribusiness.

The fast and ever-changing environment, and also agribusiness, has quickly become recognized as one of the world's most important economic sectors. Worldwide, agribusiness is highly competitive and contributes directly to many countries' rural and regional economies. The Eastern Province of Sri Lanka's Ampara District is characterized as one of Agri-based districts that contribute immensely to GDP through agriculture [7]. Higher volumes of paddy production call for a rethink of the general direction of rice milling in Sri Lanka on domestic and international markets. Maintaining rice quality is business people's main concern. Reference [21] mentioned that rice quality improvement with Sri Lanka will become even more important in the future, creating a situation where the country will have to compete with other rice-producing countries to sell local rice. Further [21] stated that Sri Lanka is demanding high-quality premium rice. Still, the country is not in a position to produce such rice due to the poor quality of the rice mills. With the objective of finding the factors that contribute to business transformation to the rice milling industry in the district through the adoption of technologies, this study was conducted with the following research questions.

1. Does organizational culture affect technology adoption?
2. Does organizational culture affect the transformation of business?
3. Does technology adoption influence the transformation of business?
4. Does the technology adoption mediate the influence between organizational culture and the transformation of business?

II. REVIEW OF LITERATURE

A. Organizational Culture affects Business Transformation

Management drives new introductions, modifications, upgrades, and enhancements to its business enterprise architecture to pursue economic growth, higher return on investment, increased competitive edge and market share. Reference [1] defines a strategic transformation as the re-selection of the product and market of the company, rearrangement of its combination and also the adjustment of its corporate structure and culture. Companies with strong cultures are healthy because they tolerate and encompass differences [6]. Transformation alters the organization's culture by changing fundamental assumptions and organizational behavior, business processes, and products; it is deep and pervasive, affecting the entire organization; it is intentional and occurs over time. Culture encompasses faiths and conducts, exists at different levels and is expressed in a variety of features of organizational life [11]. Organizational culture refers to a set of shared values, beliefs, assumptions and practices that shape and guide the organization's attitudes and behaviors of members [13].

Corporate transformation processes towards increased innovation, competitiveness and market orientation are strengthened if firms have a clear culture of encouraging change. A positive attitude towards initiative is expressed in the prevalent sense that there is something new willingly expressed by people within the organization. In contrast, the negative attitudes towards initiative coincide with a sense of paralysis. Organizations are improved when they have a positive attitude towards changes and they should have innovativeness to go further in the business. Some fear to introduce innovation in the organization as they do not like to bear the risk of change. This type of culture does not give opportunities for improving the business. In addition, supportiveness to achieve the mission and vision of the organization is also characterized by a good culture. Collective decision making and collective work attitude towards common goals are highly needed for better transformation in business. Positive attitudes towards innovation, constructed institutional behavior, a collective sense of working towards adaptation and ability to manage cross-cultural components lead to business

transformation. Globalization forces organizations to get ready for rapid transformations. Organizations must learn about different cultures, values, habits, and lifestyles of people in the world. In view of the literature, the following hypothesis was made to guide the study:

H₁: Organizational Culture has a significant relationship with business transformation

B. Organizational Culture affects Technology Adoption

Innovations improve the effectiveness and efficiency of organizational processes and products and organizational culture is one of the variables which are considered a significant factor in innovation [5]. Innovations improve the effectiveness and efficiency of organizational processes, and organizational culture is considered to be one of the variables that have an important impact on innovation [5]. New technology implementation is endless and has an impact on multi-level decision-making. The type of leadership and the organizational culture have a significant impact on how organizations respond to strategies for change and technology. Organizational culture is one of the variables considered to have a significant influence on innovation by adopting technology [5]. This can lead you to embrace creativity as the company's essential value and become more interested in business as it affects behavior of employees [9]. Accordingly, the literature considers organizational culture as one of the main factors that can stimulate most members to have innovative behavior in the organization. Further, organizational culture might influence the adoption and use of new technology within an organization. This means that organizational culture should be managed with care for the successful adoption and dissemination of technologies. Additional emphasis should be placed on increasing the capacity for change if the organizational culture promotes stability.

Food habits and demands for food are increasing because of globalization and industrialization. To satisfy the demand, the right product with appropriate technology is needed. Most of the farmers in this district have heavily relied on traditional agricultural methods and systems. They perceived that technology usage is a costly and time-consuming method than traditional ones. And also, it is a new idea for many of them and not pay attention to new technologies that can be used in their businesses. This results in less innovative products are being produced, inferior technologies are being used in the processing, and ways of doing businesses is slow. In many agriculture dominant countries, like India, China, and Thailand, the agro-industry is rapidly developing by absorbing new technologies. Given the literature reviewed the following hypothesis was formulated as:

H₂: organizational culture has a significant relationship with technology adoption

C. Technology Adoption affects Business Transformation

Technological changes such as computerization and e-commerce have created a paradigm shift in data communication, work processes and how to do competitive business. With the imminent move toward globalization and market liberalization, organizations need to be ready to cope with the rapid changes in business dynamics. In a company, changes are made in response to business or economic events and management's perceptions, decisions and actions processes in which managers see events that demonstrate the need for change [15]. In enabling businesses' competitiveness in most industries, technological assets are of crucial importance. Several authors proposed models to illustrate the role of this asset in various development phases. Reference [22] develops a model that demonstrates the critical role played in positioning the global competitive enterprise by the technologies, human expertise, organizational structure and information.

The best approach to global competitiveness lies in technological innovation. A firm must effectively manage and continuously update the sophistication level of its technology components in order to achieve and sustain a competitive advantage. However, it is important to realize that increasing the level of technological components sophistication must be achieved in conjunction with synchronized technological innovation and technological skills and the integration of a company's

technology and business strategy. Technological development has long been a significant contributor to agribusiness progress, and will continue to influence agricultural inputs, production, processing, distribution, and marketing. Technological change is seen as the most important factor in an organization's economic growth process. Technological changes tend to increase the productivity of labour, capital, and other production factors.

With the advent of the Internet and the technologies associated with it, the transformation has acquired several new connotations like managing the businesses through an enterprise approach or service delivery models that could not be thought of in the pre-Internet era. Reference [3] emphasized that technology might be the vital element of business transformation. He designates that leading firms should focus on two complementary activities to succeed in digital transformation: reshaping customer value propositions and transforming their operations using digital technologies to enhance customer interaction and collaboration. He also suggested a strategic path to business transformation, focusing on customer value propositions, transforming the operating model and combining these two approaches by concurrently transforming the customer value proposition and organizing delivery operations.

Deciding the right path to transformation – whether a significant reorganization of the customer value proposition, a transformation of the operating model or a combination of both – requires a comprehensive understanding and evaluation of several factors: such as where products and services are part of the industry-wide physical-to-digital continuum; levels of customer adoption for mobility and social networking; strategic shifts of other players in the industry; the degree of integration at every stage of the transformation between new digital and legacy, physical. This is assumed as the adoption of technologies for transformation is hypothesized as follows:

H₃: Technology adoption has a positive influence on the transformation of the business

D. Technology Adoption mediates the effect of Organizational Culture on Business Transformation

Technology adoption is a form of strategic innovation that is a fundamentally different way to compete in an existing business [10] and successful adoption technology in firms significantly affects their competitive advantages, especially the performance of firms [16]. Researchers argue that adoption of technology reduces operating costs, contributes 6 to 81 per cent marginal output increase [4], improves not only efficiency (cost reduction) but also increases effectiveness. Recognizing the determining factors of the adoption of technology will be very useful in achieving the organization's objectives for its successful implementation [18]. The technology was designed to incorporate existing values and practices, power relationships and conventions [20]. Small manufacturing enterprises interested in growth, the ability to remain flexible and responsive to the business environment through technology is an important source of competitive advantage [2]. Drawing with the view of the literature reviewed the following hypothesis was formulated as;

H₄: Technology adoption mediates the effect of Organizational culture on the transformation of the business.

Conceptual Framework

The conceptual framework of this study can be seen as follows;

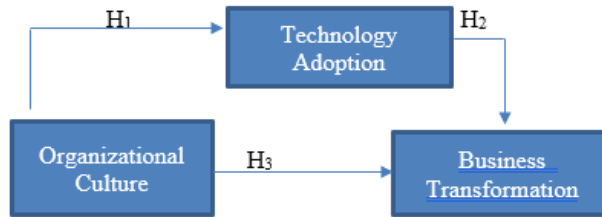


Figure: Research Model

E. Operationalization of the Variables

The variables, indicators and measures relevant to the factors affecting technology adoption towards business transformation were operationalized. The business transformation was operationalized with the dimensions of changing appearance, changing shape, and changing the form of the business. Further technology adoption was operationalized into technology components and capabilities. Organizational culture was operationalized, the degree of innovativeness, change attitudes, institutional behaviors, cross-cultural system and corporate culture. These constructs were applied in the survey model to determine the relationship among these factors by this research. The responses were measured with a 5-point Likert scale.

III. STUDY DESIGN

This study is quantitative in nature. Quantitative methods of research can be construed as research methods based on the positivism philosophy used to examine specific populations and samples [8]. Hence, the unit of analysis of this study is the rice milling business. The owner-managers of rice production businesses are directing the day-to-day operations and determine the strategic directions of the business so that they take up the role of the chief executive officer [12]. Owner-managers of such businesses are the most reliable source of information to determine the factors influencing the improvement of the business. Pilot testing of the questionnaire is extremely important. Reference [23] states pilot tests help to ascertain the appropriateness of the flow of questions, the timing for completion and respondents’ interest and attention. The research instrument used in this study was pilot tested in two stages. First, the questionnaire was pre-tested using individuals from academic backgrounds to identify weaknesses in the document. Second, the main pilot survey conducted used a sample of 10 respondents to eliminate any ambiguity in the questions used. The sample was selected from a list of rice millers available with the local government authorities in the district. All registered rice mills were included in the sample. The study uses a simple random sampling technique and this requires research instruments to collect data. After that the data is processed with a statistical analysis that aims to test the hypothesis. The population of this study was 77 rice millers in Ampara district of the Eastern province of Sri Lanka. SPSS was used to analysis of the data.

IV. RESULTS AND DISCUSSION

A. Validity Test

The following are the results of the validity test obtained.

Table 1: Reliability and Validity

	Cronbach's Alpha	Items	KMO	Explanation
Organizational Culture	0.887	18	0.766	Reliable

Technology Adoption	0.910	31	0.722	Reliable
Business Transformation	0.707	37	0.788	Reliable

The validity of the indicator is seen from the Cronbach’s alpha and KMO values for the variables recorded as above. It suggests that the instrument employed to measure the organizational culture through its dimensions towards technology adoption for transforming the business is highly reliable and adequacy. Based on the results that all indicators on the model are said to be fit

Hypothesis Test

Table 2: Correlations

	Tech nology Adoption (TA)	Business Transformation (BT)	Organizational Culture (OC)
A	Pearson Correlation	1	.582**
	Sig. (2-tailed)		.000
	N	77	77
B	Pearson Correlation	.582**	1
	Sig. (2-tailed)	.000	.142
	N	77	77
C	Pearson Correlation	.264*	1
	Sig. (2-tailed)	.020	.217
	N	77	77

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

* . Correlation is significant at the 0.05 level (2-tailed).

At this stage, the evaluation of the correlation of coefficient analyzed by looking at the significance of the relationship between the constructs indicated by the statistical r value.

H₁. Effect of Organizational Culture on Technology Adoption

With correlation results, it shows that the value of r=0.264 at p= 0.020, which is ≤ 0.05, shows significant relations between the variables. It can be concluded that organizational culture has a positive and significant effect on technology adoption with the results of hypothesis testing accepting H₁ and rejecting the null hypothesis.

H₂. Effect of Technology Adoption on Business Transformation

This second hypothesis shows that the variable technology adoption to the business transformation with r value is 0.582, $p=0.000$ significant. It can be concluded that technology adoption has a positive and significant effect on business transformation with the results of hypothesis testing receiving H_2 and rejecting H_0 .

H₃. Effect of Organizational Culture on Business Transformation

This third hypothesis from the model shows that the organizational culture variable towards the business transformation with the value of $r=0.142$, $p=0.217$. It can be concluded that organizational culture has a positive but not significant effect on business transformation with the results of hypothesis testing rejecting H_3 and receiving H_0 .

H₄. Effect of Organizational Culture on Business Transformation Mediated by Technology Adoption

Table 3: Regression Results

<i>Predictable Variables</i>	<i>Standardized Coefficient (Beta)</i>	<i>P</i>	<i>T</i>	<i>VIF</i>
Organizational Culture	-.012	0.903	-.122	1.075
Technology Adoption	.585	0.000	5.965	1.075

Note: R square is 0.338 & Adjusted R square is 0.320, $p=0.000$

Since the P -value of this model is 0.000 ($p<0.05$) which explains that 33.8% of the variance business transformation of rice millers is explained by the variables of organizational culture and technology adoption. This reveals that the millers have developed the business transformation with an adequate level contribution of those variables. Importantly technology adoption has a strong influence on business transformation. The most influential variable on the technology adoption is technology adoption ($t=5.965$, $p=0.000$). Organizational culture does not significantly influence business transformation since the t value ($t=-.122$, $p=0.903$). Nevertheless, the model is significant since multiple regressions takes a combination of variables into consideration.

The fourth hypothesis test is measuring the influence between variables of organizational culture on business transformation mediated by technology adoption. The result is that it has a significant effect, and then it can be concluded that the results of this study technology adoption mediate the effect of organizational culture on business transformation positively and significantly, meaning that testing the hypothesis four accepted.

V. DISCUSSION

Organizational culture shows a significant relationship with technology adoption among the millers. Anyhow this variable was not be a determining factor for the transformation of the business. This suggests that developing a degree of innovativeness at a higher level, setting standard institutional behavior, and corporate culture are requiring importance and the millers should adopt the relevant components for the transformation. On the other hand, the rice millers in the district were at adequate levels of technology components and capabilities adoption for transformation, enhancements of each dimension of components and the capabilities are vital.

VI. CONCLUSIONS AND RECOMMENDATIONS

This study was conducted to determine how the rice production businesses could be further developed in its culture through technological perspectives to its transformation in the district where identified as one of a larger rice producing district in the country. Business transformation enabled by technology gives proficient ways to manage the business organizations effectively and efficiently. Transformation concepts offer businesses the ways to accept changes, manage and diversify its businesses. The conclusion from the results of the survey that has been conducted to determine the effect of organizational culture on business transformation mediated technology adoption variables in rice millers of Ampara district of Eastern province of Sri Lanka, it can be concluded as follows:

1. Organizational Culture has a positive and significant effect on technology adoption.
2. Technology adoption has a positive and significant effect on business transformation.
3. Organizational culture has a positive and not significant effect on business transformation
4. Technology adoption mediates the effect of organizational culture on business transformation positively and significantly.

Further, the majority of the millers were found with a moderate level of adoption of technoware, humanware, and orgaware components while at low level of infoware adoption. This proves the heavy investment of millers on adopting new equipment; updating employees' skills and knowledge developments; adopting flexible organizational setup and managing rich and relevant information in the business are needed to develop the sector.

VII. RECOMMENDATION

This study conducted in the Ampara district of Sri Lanka should be replicated in other districts as a means to assess the reliability of the results. This will assure the development of existing practices that address more precisely the needs of the rice mills' business population in the entire country. The organizations will reach a high level of transformation when the business focused in the right environment with relevant technologies. Rice millers, as well as government, must act strongly to utilize and transfer technology in a relevant manner. Transformation is achieved through the redesign of organizational structure, processes, practices in managing human resources, and technology. It can also be achieved in terms of a change in the culture of the organization. Evidently, this study proves the redesigning of all components in the rice mills should be done. The structure should be developed best matches the firm's strategic initiatives to its market needs, changes are to be made at the task, and better coordination should be followed. From the results of the survey that has been done to determine the effect organizational culture on business transformation mediated technology adoption variables in rice millers of Ampara district of Eastern province of Sri Lanka, then it is recommended to focus on increasing the degree of innovativeness, developing standard institutional behaviors, create cross-cultural and corporate culture in the business.

Technological input also has implications for organizational restructuring in the redesign of workflow, and manufacturing, marketing, and sales systems, and their coordination. Rice millers' encouragement should be in the way of educating, assisting and motivating them to achieve those effective structural considerations, should be considered. Processes of management work in the context of the change strategy need to be examined. This technique helps meet market demands, customers and suppliers quickly. Rice millers must consider those techniques for effective transformation in the business.

VIII. DIRECTION FOR FUTURE RESEARCH

This research was conducted in one district of the country with a small number of samples. It is recommended for further research to examine the whole rice millers with a larger number of samples and add research variables.

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AUTHOR PROFILE



Dr. (Mrs) Sulaiha Beevi Athambawa, Senior Lecturer in Management attached to Department of Management, Faculty of Management & Commerce, South Eastern University of Sri Lanka. She has qualified for PhD, from University of Kelaniya, Sri Lanka; M.Sc. in Management from Sri Jayewardenepura University Sri Lanka; and BBA (Hons) from University of Jaffna. I am Involving teaching and research with the discipline of Business Management, Human Resource Management, Management of Technology etc,