

Production Success: Key Factors New Product, Transaction from New Model Stages to Mass Production.

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Abstract: Generally new era of manufacturing industries facing many types of common problem like low productivity, job dissatisfaction by employees, low salary, manpower shortage, low quality products, material shortage and other related. Some of the problem that facing by manufacturers where needs some technical or professionalism to solve it. Some issues that facing at manufacturing industries, especially electronic background is manpower turnover, material shortage, productivity, cost improvements and many more. These factors directly involve for that manufacturing productivity improvement. This conceptual paper proposal exposes about the production success during transfer from new model stage. This identifies factors that involve production success are categories as man, machine, material, method, management and Mother Nature or environment. Even though, those factors similar in Ishikawa diagram that mainly implemented for problem solving (Japan as MNC), yet able to develop a perfect theoretical framework to guide their production successfully. Some improvement activities must carry out by top managements of the manufacturing organization to minimize those highlighted problems and make successful for production transaction from new model stage to productions. At the end of this concept paper some manufacturing industries might able follow the step or route work that deeply will be analyzed for problem solving that particular for production success after transfer from new model stages.

1. Introduction

Manufacturing industries are one of the biggest contributions for the any country's growth. These industries normally allocated some specified area called as industrial zones like Shah Alam, Bayan

Lepas, West Port at Port Klang and others. The one of the reasons these manufacturing industries allocated in certain areas was due to minimize cost for transportation. That's why in some area customer and supplier allocate just nearby. So these strategies not only involve in local area, but it also applies for international manufacturing industries. This conceptual proposal basically related to this type of strategic in manufacturing industries. The purpose of this study is to identify the successful factor involve for production during product transfer from new model stage. Those factors basically identify with Ishikawa problem solving diagram. This Ishikawa diagram usual used many manufacturing industries, especially Japanese manufacturing firms. According to the history of Ishikawa problem solving method that familiar implemented Japanese manufacturing firms, this Ishikawa diagram well known as Fishbone diagram.

This problem solving method was created by Mr. Kaoru Ishikawa (1968) that usually used for product design and quality as improvement activities. Basically, this method involves six categories that identify as man, machine, method, material, management and Mother Nature as environments. That's why in certain industries they still as documentation called as 4-M change. This document will include four main categories man, machine, method and material. Any process or other changes will be circulating through this document to all related departments and also suppliers. Man as first categories under Ishikawa diagram involves factors like manpower turnover, Kaizen improvement activities and others that involves manpower. The second category machine in the Ishikawa diagram involves the factors like new technology implements, machine downtime, machine improvement activities and others that related to machines. Third categories method in the Ishikawa diagram involves like process in manufacturing production lines whereby can define as the way the product assemblies. The

fourth category in Ishikawa diagram is material involves the factors like material shortage from supplier, incoming material high rejection, high downtime at production line due to material quality issues and other related to materials. Next fifth categories is managed in the Ishikawa diagram involves like low salary, policy change, new rules implement, shift the top management in certain period and others related to management. The final categories under Ishikawa diagram is Mother Nature called as the environment. In this category some factors involve are like flood and political issues that recently occurred in Thailand. Sure, many losses might be faced by their government to overcome from this factor.

After viewing the basic concept of the problem solving method at Japanese firm, able to conclude or able to come out some raw factors for this research paper whereby able identify the factors involved and the solutions must take by the top managements. This conceptual paper able to help any manufacturing industries that might be facing same production success issues. Basically, this conceptual paper identifies manpower turnover is one of the factors involve for production success because when new manpower getting in manufacturing industries, they will be provided all related training that attached within later. So they able develop them self their working skills and directly increase productivity that cause the production success. The problem might occur when they don't satisfy in their job that cause by salary, annual bonus or benefits or high salary pay at other companies. During this issue sure this manufacturing industry will face manpower turnover if the top management didn't take proper actions as soon as possible. Job satisfaction among manpower also gives high effect to the manpower turnover. One example is when these manufacturing companies implement working shift 7am until 3pm and 3pm to 11pm along 10 years. But suddenly top management decided change working time from 7am until 7pm and no more shift.

These might be one of the improvement actions by top management for their cost reduction improvements, but it directly involves job satisfaction among manpower that guides them to leave this company.

Another factor that involves in production success is when transfer from new model stage to mass production is the minimum skill among manpower. Normally working skills developed from the first day enter to work. But minimum skill still becomes one of the factors that contribute to production success of the new model stage. The main reason can be identified here is due to the facing new type or new concept of the product. Other than that if the skill full manpower has already resigned the jobs. In manufacturing industries, it is very difficult to maintain the quality of the product once transferred

to production. This scenario occurs because of the mass production manpower facing new product might be totally different from previous product. If the skill full manpower just resign the job, his or her place sure need to replace by new staff that still minimum skills. Regarding to these factors it's really effect the production success when product transfer from new model to mass production.

Besides those factors in manufacturing industries, one of the key roles of the productivity improvements is introducing high technology sources like auto machines that able to be concluded as a cost saving plan by top managements. These new technology introductions will minimize the usage of manpower and fully automated function at production lines. Normally in new model stages of production will prepare just minor manual jigs and machines that required minimum number of manpower due to the prototype stages. But when the product transfer to mass production stages, top management needs to design and summarize all cost saving plans and linear to this they introduce new technology machines that able contribution for cost reduction plan and also quality as well. But the issue now is when introducing new technology; it's really taking long time period for setup and production used. Furthermore sure needs high skill manpower to operate these machines. This research paper really will be guided to the analysed type of the issues facing under high technology factor.

Minimum wages that applied in manufacturing industries also indirectly become as one of the factors of production success. Because minimum wages that provide should be satisfied by the manpower if not sure will affect their job satisfaction of then the manpower turnover factor involve in it. Regarding this Malaysia government introduce minimum wages as RM900 as basis for all manufacturing industries beginning of 2013. This plan can conclude as one of the major improvement action by the government for manpower job satisfactions. The problem that occurs when other countries minimum wages lower than from here sure the production line will be transferred to another nation. Besides that, when a salary adjustment applied some manpower compare those increments by themselves to other who performs a similar task at manufacturing industries. So this research abilities to reveal these types of issues with the best solution to overcome at manufacturing industries.

Among those factors that contribute to production success, management change factor is a common in manufacturing industries phenomena. At manufacturing industries usually top management will be revised by the time to time or every year. Due to this management change, the decision taken by the management also has to change. If the management still remains with previous agenda or plan should be ok. But the problem will outcome once management

change and new top management won't agree with a previous decision and would like to revise the all plan. Due to these changes sure will have an effect on the production success when product transfer to new model stages of mass production. So this research able to identify the root causes of the problem of managing change and find the best solutions.

Besides that material shortage is also a factor that contributes to production success when the new model stages transfer to mass production. Material shortage can be defined as a less material supply into production line during that product in high volume running. These material shortages caused by the supplier, when they unable delivered raw material that used for product assembly. Can conclude also supplier who unable to supply for the demand increasing rapidly. In manufacturing industries material shortage also occur if error found in their monthly planning. Planning is the core of the solution because production running based on the planning plan chart. In this research material shortage issues able to be solved by carrying out some improvement plans to make production success when transfer from new model stages.

The final factor that contributes to production success is a high rejection in production line. Production rejections having high impacts on productivity, especially in manufacturing industries. This high rejection factor will lead for unfenced of productions because high rejection will minimize the total production output and also increase the cost. This factor should be categories before begin to analyze because of manufacturing industry's rejection caused by some elements. Some elements are in the process itself, material or handling. Transaction, product for new model stages of mass production normally facing high rejections by handing, the material itself and also by new technology introductions.

After seeing those highlighted factors, its highly motivated to propose this conceptual paper to any Japanese manufacturing industries because of normally these Japanese manufacturing firms will follow the basic concepts of problem solving by using an Ishikawa diagram or called Fishbone diagram.

2. Literature review

Manufacturing industry production success after transfer from new model stages is supported by some factors that explained earlier. Regarding this title some researcher has been revealed based on the manufacturing industry productivity performance and successful stories. Markus and Francis (2010) have been conducted a studies about the productivity analysis in global manufacturing productions. In

their studies identified that they recognised the importance of manufacturing industries for successful development when it's a cross-country analyses. In their result, they found that differences in production technology and also labour productivity when production transfers to another country. So this research study also will be similar to their studies. But the gap able fills up in this study by focusing on production success from new model stages. So the global production cross-country automatically involve in it. Janet. K, Susanne. R and Doug. W (1999) revealed that manpower factors and plant closures in multi plant firms including manufacturing industries. In their research they studies about a runaway shop that seen as future of industrial change in the USA that indirectly affect the manufacturing industries whereby found difficulty for manpower due to all transfers to runaway shop. They able identify those main factors that involves of the transaction of the industries. Besides the manpower planning, manpower turnover issues, material planning also one of the factors or role in producing success, especially product transfer from new model stage for mass productions. Regarding this factor, Patrick and Arne, M (2006) analysis about the material planning application in manufacturing industries. MRP is the inventory control, production planning and scheduling control system that used in the manufacturing process. The main objectives of this MRP system are to make sure the product is available at the production line and inventory ready to deliver to customers. Another purpose is to maintain the material inventory level at lowest at the store so that able controlling money flow. The final objective of MRP is to plan manufacturing activities, delivery schedule, and purchasing activities. The main purpose of their studies was to analysis, material planning methods that implement from the year 1993 until 2005. Their finding identifies those material resource planning (MRP) is the common method that used from all over their studies years. It means the MRP system is the very typical system that must use at any manufacturing industries due to the productivity improvements. New Technologies that introduce in manufacturing industries plays main role in their production success. Regarding this technology introduction in manufacturing, a research has been carried out by Mary and Jack (1994). Their studies about the relation in organized and flexible in manufacturing technologies. Based on their research paper it's really can guide for manufacturing industries, especially managers those really need to introduce new technologies in their manufacturing industries. So based on their findings, once introduce or already implement new technologies the organization of top management needs to be flexible towards the new technology, so that able meet their target for quantities and also qualities. Besides

organizational contribution enter into new technology in manufacturing industries, some researcher from Hong Kong have been carried studies about engineering change management at U.K. (Huang & Mark 1999). According to them current engineering management rapidly changes due to the engineering challenge due to marketing competition, customer demands and also advances technologies. Based on their studies, engineering change management really supports for the manufacturing industries where those companies involve in their research. In addition, they have also commented that not all manufacturing industries implement these type of improvement activities. If applying sure able to increase the productivity also production success. While going through some studies about production success, one article have been identified about the deference's successful and unsuccessful of new product in international markets (Mehmet 2014). In his studies, he more detail elaborate about the export performance and their supporting factor to identify the successful and unsuccessful of new product. In his studies, he identifies element export sales, export market, export profitability and general competitive position of company support for export performance. In generally his studies about integrating knowledge from two categories and expand new model success in international markets. So his study guides how his framework able leads others for export performance in manufacturing industries. This is really helpful for managers and policy makers. According to his finding he identifies that pre-development and new development of the new product stage is large and fast growing activities whereby need to care special intentions to make sure product success. Besides that the upcoming introduce product characteristic also will make sure that export performance strongly supported or not. Besides that factor, Yuan Chang, Jen Hu and Lin Hong (2012) highlighted about the key factors for production success when transfer from new model to mass productions. In their studies, they explain about supply capability, manufacturing capability and technical support capability that might be the key factors for mass production when transfer from new model stages. Those three factors supported by individual elements that might be involves direct or indirect. Some of the elements under supply capabilities were on time delivery rate, strength of relationship with a supplier, deliver lead time and the ability to modify as existing order. The second factor under manufacturing capabilities, some of the elements involved were production lead time, production flexibility, degree of modularization, yield rate and process flexibility. As the third factor whereby the technical support capability, some of the elements involved were business process reengineering, multiple skill labour, modern information technology, ability to solve

problem and also virtual enterprise. These factors and elements were involved in their research studies until the design their framework. Based on their framework some manufacturing industry manager or high ranged technical officer might be able used it as a guideline for solving their problems. Their conclusion and finding really explains detailed with their researched data where their ISM and ANP model having some several advantages when compared with other multi-criteria methods. These hybrids modelling able to generate by using different of element that will guide to select better decision before any improvement actions taken by the top managements of the manufacturing industries.

3. Conceptual framework

Based on the literature review, that explains or describe briefly regarding factors that involving for production success, this proposed or designed framework able to be followed to identify some variables that can be used for deriving its hypotheses. This proposed framework similar that implemented by the Yuan Chang, Jen Hu and Lin Hong (2012) that they describe about implementation of interpretive structure modelling (ISP) and analytical network process (ANP) to identify the key agile factor in launching new product to mass production. In their research, they proposed some method like MADM need to be determining of the weight of the criteria. Similar type of their framework applied in this proposed conceptual paper, but not used any of their suggestions because of this research on manufacturing industries, applied the Ishikawa problem solving method that has to back to a basic concept for problem solving. So, based on the theoretical framework able to modify or re-structure similar framework that suitable for this research that production success when transfer from new model stage. The production success defined as the dependant variables and six independents that modified from the Ishikawa diagram used to be for analysis and the end finding the right solutions.

Dimensions	Factors
D1: Supply capability	F1: On-time delivery rate F2: Strength of relationships with suppliers F3: Delivery lead time F4: Ability to modify an existing order
D2: Manufacturing capability	F5: Production lead time F6: Production flexibility F7: Degree of modularisation F8: Yield rate F9: Process flexibility
D3: Technical support capability	F10: Business process reengineering F11: Multiple-skill labour F12: Modern information technology F13: Ability to solve problems F14: Virtual enterprise

Based on their framework, some modification added to design this conceptual paper framework based on the current topics where the key factors of production success during product transaction from new model stages to mass productions. Those factors are really having a direct contribution to the production success.

3.1 Production success

In this research paper production success defines as when some successfully product transferred from new model stage to enter mass production. Normally in the manufacturing field, new model stage or in other words called as research and development (R & D) they get the order from customer in small amount of quantities. During these stages, they need to prepare some prototype samples for customer and also as customer requirements. In manufacturing industries, new model stages are considered very important because if any failure during this stage, they will face the high possibility of losing business in that particular product. In this research, case is something different, where during new model stage they able complete assigned task perfectly as customer needs or requirements. Once get more order for that product, top management needs to take decision to transfer that product to mass production. The main reason top management decides to transfer product from the new model stage to mass production are due to high demand for customer, cost saving plan, individual production line, manpower able to optimize and also transportation to customers. The problem facing after these products transfer is big and need find a solution as soon as possible, if they will lose the business and it goes to other competitors.

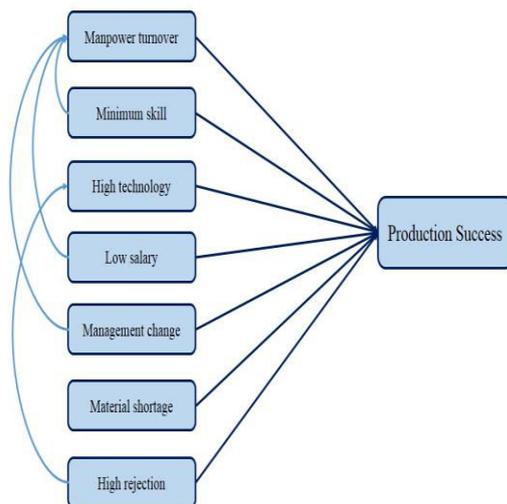
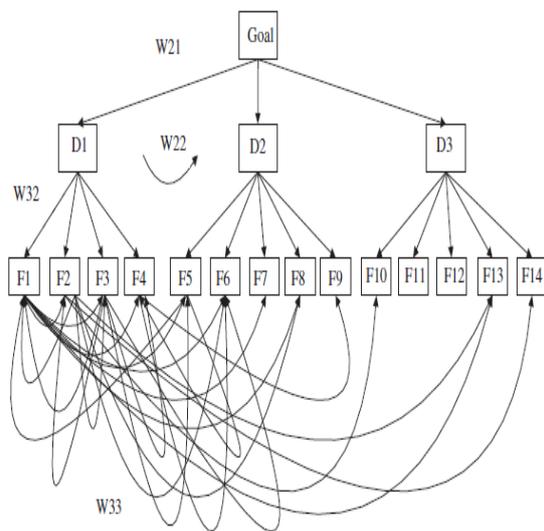


Figure 1- Conceptual framework

3.2 Manpower turnover

Manpower turnover or person in charge (PIC) having contributed to production success. Basically manpower turnover is one of the main factors that contribute to low productivity in manufacturing industries and also other service sectors. Before controlling manpower turnover, must identify the root caused that encourage employee resign the job and find other jobs, Just under this manpower turnover can be analysed some sub factors that having impact for them resign jobs and find another. Some factors are low salaries that received by the employees. Low salary also can be decided as one of the main factors that will be have contributed for productions success. Another element of the manpower turnover is by introducing of the new manufacturing company nearby area. Normally when new manufacturing company begin operate, they will impose by their salary, facilities and also benefit. Those criteria will be as attractive for them just leave the current job and join new jobs.

3.3 Minimum skill

Minimum skill or low performance skill also will affect the production's success. Regarding factors can be a strong support by the production output. For the examples of the nature of manufacturing industries, if rejection rate is high sure the production output will be low. So must be researched more detail about the rejection rate that can be identified as one key factor for production success, because the rejection rate also can be occur by the low skill employee by handling. Usually once new employees join the work as an operator at manufacturing industries, they will provide related trainings that requires to their job scope. But these training doesn't easily implement at work base because it really needs time to training them self. During a certain period, these employees will be examined by on the job training whereby are there performing well as required. Being one of the manpower in manufacturing industries is really a difficult job because total manufacturing business depends on them. Due to overcome issues for employee for their skills improvements, training and development departments will provide necessary training to them and examine them always. Some more in certain critical job performance their prepare special licence where at that stage need really important skills at the production line. So during new model stages transfer to mass production these types of the especial skill manpower really required for the production success.

3.4 High technology

Introduction high technology in any manufacturing industries is common improvement actions that carried out by the top managements. The objectives of the new technology introductions at manufacturing industries, especially at production line is to minimize the production cost. Normally during new model stages a simple line will be arranged, where by sometime this minimal equipped line needs to share their line with different new products. The critical occurs when these products begin with high volume. At this time management needs to prepare this new product to mass production. So they have to well arrange one full line capacity that able to support the product out as customer demands. Due to the line arrangement, for the examples during prepare in new model stages the requires nearly around ten manpower to complete the new production output. But at mass production they need to prepare four lines together with manpower. Due to cost reduction new technology face in whereby this new technology machine able to contribute maximum output with minimum manpower. So that able cost, saving more. But not that easy to getting maximum output by using the new technology machine because it really needs time to machine qualifications and also test run. If not sure this product will face quality issue by the

customer. This paper really will analyse the issues that occur by introducing new technologies during transfer new model to mass productions.

3.5 Low salary

A low salary or can identify as minimum wages also one if the key factor in production's success. Because low salary indirectly involves in job satisfaction among employee that having high contribution for manpower turnover and also having minor effects on production quality. But those able to the proven by this study. Due to job satisfaction that occurs by low salary, Malaysia government have been announced as RM900 is a basic salary for employees at peninsular and RM850 at Sabah and Sarawak. But, this increment not satisfied by the senior operators because their working experience more than 10 years, but the increments just RM85, but for operators that recently join with 2 years working experience salary increments RM280. Due to this high turnover by operators gave direct impact to the industries by lowering the productivity, because many skill full operators just resign and move to other companies that willing to give higher pay with their working experience. By the facing these types of problem production success really effected. To overcome this issue top management really needs to find some alternative solutions to cover up employees to resign. Some of the activities are giving annual bonus and also annual souvenir. Annual bonus also giving a big impact for manpower turnover, because many manufacturing industries unable to pay annual bonuses during economic crisis.

3.6 Management change

Management change factor just as a supporting for production success because, normally management change just follows up with the decision top management will decide on making by top management. In Japanese manufacturing industries, top management will decide staff will allocate in other countries to support the production or new model team. The time period allocates for them is just 5 years or depends on top management decision. During these periods he or she will perform many improvement actions or activities. Some more he or she already well known about local staff's behaviours and able continue to perform without any issues. The problem occurs when he or she have to back to her or his headquarters. Another person will replace the position. During these transaction periods, new person might be not following the interactions that introductions by the previous staff. These type phenomena that in manufacturing industries really give small impact to production success. The most important this is when the decision making during new model stages transfer to mass productions. The wrong decisions making sure will give maximum impact to the production success.

3.7 High Rejection

High rejection or rejection yield really is a common term that usually used in manufacturing industries. Yield normally calculated based on the production output that materials, machine downtime, manpower used will log in. Basically production will keep same rejection rate for the product output. But the problem occurs when these production rejection rate is high. During new model stages transfer to mass production the production rate sure high. These rejection high contributions by some elements. Those are material rejection, product handling methods and rejection rate of the products, process its self that from a machine or jigs. If able to control these rejections by it his give a contribution for production success.

3.8 Material shortage

Material shortage is one of the factors of production success when transfer from new model stages. Material shortage can be defined as when the production line facing down time due to the no material in to run production. That means manpower and all assembly lines will wait until the material in to resume production. This phenomenon is really frequent in manufacturing industries. Material in on time delivery is the key factor for material shortage. Another issue that contributes for material shortage is incoming material quality. Quality issues are one of key factor. Usually nature of work in manufacturing industries, once material in it will be undergoes by quality departments whereby there will examine and analysis material that within the specification as required for the product. Once complete analysis that report will review by top management that can or can't release to the production. Once getting approval from top management then the material will release to the productions. Basically, these processes will take around two or three days to complete. If these material delay enter to incoming quality department sure its main caused for material shortages. This conceptual paper able to analyse those key factors to solve the issue that facing during new model stages transfer to mass production.

4 Conclusion

Manufacturing industries really facing very critical issues during product transactions from new model stages to mass production. This conceptual paper really helps those managers and industrial, top managements, especially from Japanese firms to overcome their problems or issues that similar to this paper. Basically production success involves some factors that need to be identified as very important

because that factor will be analysed first and find the best solutions to overcome. Those factors are manpower turnover, minimum skills, new technology, low salary, management change, high rejection and material shortage. Even though those factors having a direct impact to the production success, among those factors also having individual contribution or relations that might be give some impact to the production success. The first factor that having relations with other factors, are manpower turnover. This factor has relation to the low salary, minimum skill and also management change. The main root cause that involves these factors is job satisfaction because all of them involve person those working in manufacturing industries. Low salary among employee sure will have effect to job satisfaction because all employees working for money that really need for their daily life. If those salaries are minimum when compared to the other company sure employee resign current job and join another company. These types of employee jump really to another company really give negative impact to the production success because of the losses of their skills. Here can identify that the relation from low salary connected to the minimum skill employees. Minimum skill occurs between employees when management didn't prepare proper training. Manufacturing industries should prepare proper training to the new appointed employees. Less training, providing will affects the quality of the product and also one of the elements that will having contributions for production success. The suitable training program for newly appointed employee is when they join a company, which company will prepare some training modules that must go through by all employees. This training module will completely involve the process must perform by employees. Some material that can used as video recording or work instruction. These trainings involve also about the safety and other policies that the manufacturing company is involved in. Once complete, these training modules, those employees will be handing over to the production leader called as line leader who will in charge of those employees. Now those new employees will be counted as manpower. During perform work, they will closely monitor and feedback to the training & the development department to check levels of the job performance. In some critical area, that employee must get some special certification due to the quality issues. That certification will be certified every year by superior of the departments. This process will improve job satisfaction for employees. Some minor effects will be from the management change due to the always changes of the superior because of the behaviour of that particular person. Basically very difficult to accept the management changes when appointed new superior. It newly appointed superior able to equalize or satisfy with the subordinates it

will be great. But the problem when they unable understand each other that finally contributes to job satisfaction among them. New technology introduction in production is normal activities any of manufacturing industries. Normally any industry will loses much in term of productivity when product transfer from new model stages to mass production stages. But, the issue here is how long needed to overcome these issues. Due to this they really need those employees are very high technical knowledge where fast learn to trouble shoot. This new technology introduction will be having contributed to the high rejection rate and also quality issues. But the responsibility by the person in charge is very high to make sure all the production output should be within the customer specifications. After this discussion can be concluded that the conceptual framework might be useful to managers or top management of the manufacturing industries, especially Japanese firms that facing the same issue as this conceptual paper. These important factors might be important or not, but need to carry out data collection to analysis and summarise those data. Another thing is this proposed conceptual framework should implement for individual manufacturing industries because might be some industries not really applicable at all.

5 References

1. Ajay Menon & Bryan A. Lukas (2004). Antecedents and outcomes of new product development speed: A propositional inventory germane to marketing. *European Journal of Marketing*, 38(1/2), 209-223.
2. Angie Craig & Susan Hart (1992). Where to now in new product development research? *European Journal of Marketing*, 26(11), 306-566.
3. Bong Lee, K & Wong, V. (2010). New product development proficiency and multi-country product rollout timeliness. *International Marketing Review*, 27(1), 28-54.
4. Chonlatis, D & Barbara, I (2012). Acculturation of local new product development team members in MNC subsidiaries in Thailand. *Asia Pacific Journal of Marketing and Logistics*, 24(3), 351-371.
5. Cindy Johnson (2008). Decision '08: event marketing or product sampling? *Journal of Consumer Marketing* 25, (5), 269-271.
6. Edward A. M, Cornelia. D & Shawnee, V (1996). Boundary spanning interfaces between logistics, production, and marketing and new product development. *International Journal of Physical Distribution & Logistics Management*, 26(8), 43-62.
7. Edwin J. N & Ruud T. F (1998). Market research companies and new product development tools. *Journal of Product & Brand Management*, 7(4), 305-318.
8. David J. Slattery & Joseph G. Nellis (2005). Product development in UK retail banking: Developing a market-oriented approach in a rapidly changing regulatory environment. *International Journal of Bank Marketing*, 23(1), 90-106.
9. Erin Parrish (2010). Retailers' use of niche marketing in product development. *Journal of Fashion Marketing and Management*, 14(4), 546-561.
10. Geoffrey, Denise, Peter & Kimberly, A (1997). Brouchous New product development: using the Salesforce to identify opportunities. *Journal of Business & Industrial Marketing*, 12(1), 33-50.
11. Gianluca & Emilio (1996). Strategically flexible production: the multi-focused Manufacturing paradigm. *International Journal of Operations & Production Management*, 16(11). 20-41.
12. Graham R. M & Elias.K (2007). Interpersonal trust between marketing and R&D during new product development projects. *European Journal of Marketing*, 41(9/10), 1146-1172.
13. Huang & Mak (1999). Current practices of engineering change management in UK manufacturing industries. *International Journal of Operations & Production Management*, 19(1), 21-37.
14. Janet, Suzanne & Watts (1999). Manpower factors and plant closures in multi plant firms. *International Journal of Manpower*, 20(7), 458-468.
15. Laurence, J & Paul, H (1998). Japanese product development strategies. *Journal of Business & Industrial Marketing*, 13(2), 132-154.
16. Leila & Jonathan (2010). New or recycled products: how much are consumers willing to pay? *Journal of Consumer Marketing*, 27(5), 458-468.
17. Manuela Lo'pez & Mari'a Sicilia (2013). How WOM marketing contributes to new product option: Testing competitive communication strategies. *European Journal of Marketing*, 47(7), 1089-1114.
18. Mark, T (2011). Producing historical critical marketing studies: theory, method and politics. *Journal of Historical Research in Marketing*, 3(4), 549-575.
19. Munksgaard, K & Freytag, V (2011). Complementor involvement in product development. *Journal of Business & Industrial Marketing*, 26(4), 286-298.
20. Pattikawa. L.H, Verwaal. R & Commandeur. R, H (2006). Understanding new product project performance. *European Journal of Marketing*, 40(11/12), 1178-1193.
21. Peng Chu, Rong Li & Ju Lin (2011). The joint effect of project-level exploratory and exploitative learning in new product development. *European Journal of Marketing*, 45(4), 531-550.
22. Randi, P (2003). Relationship marketing can mitigate product and service failures. *Journal of Service Marketing*, 17(1), 37.52.
23. Robert, R & Caroline, L (2003). Supply chain market orientation in new product development in the UK.

- Journal of Fashion Marketing and Management, 7(1), 65-77.
24. Sivakumar, K. and Nakata, C. (2003). Designing global new product teams: Optimizing the effects of national culture on new product development. *International Marketing Review*, 20, (4), 397-445.
 25. Sondergaard and Harmsen (2007). Using market information in product development. *Journal of Consumer Marketing* 24(4), 194–201.
 26. Stanley K.S.W & Canon, T (2012). The influence of market orientation on new product success. *European Journal of Innovation Management*, 15, (1), 99-121.
 27. Stefan, L (2005). Customer involvement in new product development: A relationship marketing perspective. *European Journal of Innovation Management*, 8(4), 424-436.
 28. Susan J. Hart and Michael J. Baker (1994). The multiple convergent processing model of new product development. *International Marketing Review*, 11 (1), 77–92.
 29. Svendsen. M. F, Haugland. S. A, Grønhaug. K & Hammervoll, T (2011). Marketing strategy and customer involvement in product development. *European Journal of Marketing*, 45(4), 513-530.
 30. Thomas & Horte (2002). Success factor for improvement and innovation of process technology in process industry. *Integrated manufacturing system*, 13(3), 158-164.
 31. Tiger Li, J.A.F. Nicholls & Roslow.S (1994). The relationships between market-driven learning and new product success in export markets. *International Marketing Review*, 16(6), 476-503.
 32. Vishag. B & Dennis. B. (2008). Effective virtual new product development teams: an integrated framework. *Journal of Business & Industrial Marketing*, 23(4), 242–248.
 33. Woodside, Pattinson & Kenneth (2005). Advancing hermeneutic research for interpreting inter firm new product development. *Journal of Business & Industrial Marketing*, 20(7), 364–379.
 34. Yen Hsu (2011). Design innovation and marketing strategy in successful product competition. *Journal of Business & Industrial Marketing*, 26(4), 223–236.