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Minimum Wage and Productivity: The perspectives and implications of Malaysian hotel employees

Idaya Husna Mohd *

Faculty of Business and Management, Universiti Teknologi MARA, 42300. Puncak Alam, Malaysia

Abstract

This study explores the effect of the newly introduced National Minimum Wage (NMW) on the productivity of Malaysian hotel employees based on the insight of several domains which include the analysis of government policy, literature reviews, fieldwork and stakeholder views. The fieldwork includes an extensive employee quantitative survey research to explore their responses to the potential impact of the NMW on their productivity. The findings of this study highlighted the understanding of the productivity concept based on the employees' understanding and perspective. Based on the findings of this research, in terms of productivity, it is clear that the employees are ready to respond positively to the changes in their work pattern provided wages are increased. This study makes a significant contribution towards assisting the key players in the hotel industry (policy makers, hotel associations, trade unions, employers, and employees) to develop a more strategic and effective approach to the implementation of the NMW.

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Keywords: Minimum Wage, Productivity, Hotel industry, Wages

1. Introduction

The introduction of National Minimum Wage (NMW) brought in a debate on how the industry would cope with the anticipated implications, in particular on the wage scheme. Based on an analysis of government policy, literature reviews, fieldwork and stakeholder views, this research paper explores the implications of the introduction of the NMW on the productivity of the Malaysian hotel employees. Previously, wages are usually left for the market to

* Corresponding author. Tel.:

E-mail address: idayahusna@salam.uitm.edu.my

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determined; therefore, the NMW were predicted to cause changes within organizations, especially the HR practices. As the wage scheme composition changes involve rises in cost, the impact is predicted to hit HR practices especially employees' productivity. Another consideration is the nature of the hotel industry itself, which is high labour-intensive where service is the 'core product'. As services are human related, unpreserved and are perishable, there builds pressure on managers. Managers are to use employees efficiently, instead of having to rely only on technological innovations (Mills, 2008).

In the Ninth Malaysia Plan, the hospitality industry in Malaysia is considered to be strategically important, with employment of 957,000 people, thus representing an important source of foreign earnings. It was during this period that the debate around the NMW arised, creating the opportunity for this research. To date, there are inadequate amount of studies that explore the impact of the minimum wage on HR practices in the Malaysian hotel industry. Studies of the Malaysian hotel sector are scarce (Ansari, Kee & Aafaqi, 2000; Hemdi, Nasuridin & Ramayah, 2003; Nasuridin, 2001). However, similar studies of minimum wages in the hotel industry are normally based on other countries. Such studies are by Brown and Crossman (2000), Lucas (1995), and Phillips and Appiah-Adu (1998). Other studies have emphasised on industrial relations and human resource management and development in the hotel industry (Guerrier & Lockwood, 1989; Hoque, 1999a ; Hoque 1999b; Johnson, 1983; Lucas, 1991, 1992; Morrison, 1998; Phillips & Appiah-Adu, 1998; Price, 1994). In the Malaysian scenario, instead of investing in machinery and modern technology, employers believe that it is more lucrative for them to invest in low-wage workers which in return would contribute to greater productivity (The Star, 25 April 2008). This paper further explores the potential effect of the NMW on hotel employees' productivity. While the impact of an NMW on labor productivity, especially in the hotel industry, is not easily measured and determined, this study anticipates on how the employee perceives productivity with the implementation of the NMW and how employees measure their productivity.

2. Literature Review

Minimum wage in Malaysia

In Malaysia, the sectoral minimum wage has existed since 1947 covering sectors where the unions are not strong, workers received very low wages and wage coverage is limited and not frequently upgraded. Under the sectoral minimum wage, four wage councils were covering up for cinema workers, shop assistants, hotel and catering industry workers, and Port of Penang stevedores. These wage councils were infrequently upgraded up till the 1980's. It was occasionally being updated until 2012. Before 2012, Malaysia was considered unusual for not having a NMW (Malaysian Employment Act, 1955). All the reasons for not having a NMW lies in the Malaysia's industrial policy as Malaysia tend to concentrate on foreign direct investment. Malaysia had emphasized the pursuit of economic growth through attracting foreign direct investment in manufacturing and the export of manufactured goods (Ninth Malaysia Plan, 2006) for several decades. Regardless of having relatively small trade union membership, the MTUC, played an important part in developing the claim for a National Minimum Wage. MTUC, being the principal trade union body for private sector unions in Malaysia stated in one of its objectives, to promote the interest of its affiliated organizations in improving the economic and social conditions of workers (Aminuddin, 2006). Hence, MTUC had never stopped claiming for the NMW since 1996. After the long debate, in 2008, the government finally agreed to take the MTUC's proposal for a NMW of RM 900, plus the additional cost of living allowance (COLA) of RM 300, into consideration. Minimum Wage Orders 2012 commenced on the 1st January of 2013 with RM900 was set as the minimum wage for Peninsular Malaysia and RM800 for Sabah and Sarawak (West Malaysia), with deferment given to the hotel industry. The deferment granted by the NMCC was to allow the hotel industry to make a final decision on the wage mechanism to be used (Mohd, 2013).

The Malaysian Trade Union Congress (MTUC) saw a record 35% salary increase and a 100% increase in the cost of living allowance for public sector employees in 2007. Finally, in 2008 the government agreed to take the MTUC's proposal for a NMW proposal of RM 900, plus an additional cost of living allowance (COLA) of RM 300, into consideration. The Minimum Wage Orders 2012 which commenced on the 1st January of 2013. However, a deferment was given to the hotel industry in which, the deferment was to permit the hotel industry to decide on the wage mechanism to be used. This research further explores the impact of the introduction of the National Minimum Wage (NMW) on Human Resource (HR) practices and employee productivity in the Malaysian hotel sector based on

the period from 2009 – 2011. This research evaluates the potential effect of NMW implementation (pay) on staff productivity.

Productivity

Productivity measurement, tend to sound simple, however, seems to be difficult especially in the hospitality service industry. In the simplest form, productivity analysis involves the input and output ratio. Inputs in the service sector take into account the labor, capital, and natural resources. The output, on the other hand, takes into account the number of meals served, guests sent to rooms, rooms cleaned and so on (Pickens,2006). However, it became a challenge when it comes to the selection of the accurate and sensible input and output concerning the task measurement (Ball et al., 1986; Johnson & Ball, 1989). Jones and Lockwood (1989) further adds other challenges when measuring productivity in the hospitality industry which include (i) the simultaneous production and consumption of hospitality services; (ii) customers' participation in the service production process; and (iii) the perishability and heterogeneity of hospitality services.

In a more recent research, productivity measurement approaches were being developed. Among others are by Pavesic (2009), Sigala (2003, 2004) and Sigala, Jones, Lockwood, and Airey (2005) which involve a systematic, three steps productivity metrics. The three stages productivity metric was developed after analyzing and considering the theoretical and practical implications of the problems of hospitality productivity. Brown and Dev (1999) came up with a six single-factor productivity measures after measuring capital productivity and labor productivity. Djellal and Gallouj (2010) contended that the concept of service productivity itself is debateable as it is poorly measured and conceptualized inappropriately. Roghanian, Rasli, and Gheysari (2012) proposed another dimension of productivity measurement. According to Roghaniat et al. (2012) quoting EPA and Japan Productivity Center (JPC), stated that productivity is recognized as an "attitude of mind" as it enhances the existing task on day to day basis. Roghanian et al. (2012) also highlighted a few other current definitions of productivity of which includes Pritchard (1995), Rantanen (1995), Asia Productivity Organization and Kirikal and Tallinna (2005). The definitions include productivity as the combination of efficiency and effectiveness and productivity as the focal factor in managing performance (Neely, Gregory and Platts,2005; Anderson,Fornell and Rust,1997; Acur and Englyst,2006). Productivity were also defined as firms directions towards missions and target (Dixon, Nanni and Vollman(1990); Kaplan and Norton (1996) and Rantanen, Kumala, Lonnqvist and Kujansivu (2007). In a more recent study, Serdar et al., (2014) however, contended that service productivity is the main player of a company's competitive advantage.

However, things are rather different in the Malaysian hospitality industry where the wage mechanism includes the point system. Managers are also encouraged to use the 'Productivity Linked Wage System' (PLWS). PLWS, developed by the Ministry of Human Resources act as a measurement tool and a strategic tool that link wages to productivity thus creating firms competitiveness, business efficiency, and employment stability. According to the Ministry of Human Resources, PLWS was said to facilitate employees in obtaining a fair share of gains that arise from productivity growth and performance improvement, thus encouraging equity and social cohesion, and enhancing the quality of life (Mohd,2013). In the Malaysian context, as mentioned by Goh (2010), labor productivity is relatively important in influencing wage increases.

Saget (2000), supported that there are three ways found where minimum wage improve productivity. Among others are: (i) when employees are motivated to work hard when paid a good, decent wage; (ii) where there are reduced in labor turnover costs; and (iii) when the relationship between employer and employee are well-maintained, nurtured by paying the appropriate wage. Saget (2002) further suggests that minimum wages will induce firms who are threatened with higher labor costs to take steps to raise productivity. Capital, on the other hand, can be substituted for labor and skilled labor can be replaced by unskilled labor. These measures are to improve efficiency and avoid waste (Saget, 2001).



Fig. 1. Theoretical Framework

3. Methodology

This study is the second stage of a study involving both hotel employers and employees. The first stage involves a series of survey and interviews were conducted on hotel employers. The questionnaire used in stage two was designed in the response to the results of the findings from the employers' surveys in stage one. The questionnaires were then distributed among hotel employees. A sample of 50 hotels is considered reasonable as representative of the whole population. From the convenience sample gathered by the researcher, more contacts for the questionnaire survey were generated through snowballing technique with a total of 1500 questionnaires circulated. The questionnaire were only circulated to the rank & file (non-managerial) employees from the 50 hotels. From the 1500 questionnaire distributed, 810 questionnaires were returned thus satisfying the rule of thumb as proposed by Roscoe (Sekaran, 2002). Furthermore, these 50 hotels covered 3 to 5-star hotels in the selected states, and the 810 employees were from the 50 hotels. In terms of data analysis, researcher mainly used frequency and descriptive analysis while Hierarchy Linear Modelling software was used to analyze the overall result incorporating both result of employers and employees. However, as the objective of this paper is to only look at the the productivity concept based on the employees' understanding and perspective, only frequency and descriptive statistics will be used.

4. Findings and Discussions

Majority employees (55%) worked in 3-star hotels, while the balance of 20% and 25% from 4 and 5-star hotels respectively. Respondents consisted of 48% male and 52 % female where they were among the younger workers (less than 32 years old, 36%), and this approximately reveals the age composition of the hotel workforce. Most of the respondents were married (51%). Regarding education, 41% had achieved their high school certificate, a further 11 % went to complete their certificate in the local colleges, 25 % had completed their diploma and a reasonable number holds higher qualifications e.g. bachelor's degree (11%). Most respondents had at least two years of experience working in the hotel sector and mostly worked full time (95%). Regarding trade union membership, Eighty per cent of the respondents did not belong to a trade union. As most of the respondents did not belong to a trade union, this means that respondents have to stand for themselves. This therefore provides an influence on how the respondents' response to the questions as shown in Table 1. Using Cronbach's Alpha, the reliability and validity analysis were conducted in order to examine the reliability of the variable. For the purpose of this study, the result for productivity is 0.77, indicating a good reliability scale. According to Nunnaly (1994), any values above 0.7 and nearer to 1 are considered good. Therefore, the items tested in the study are reliable and valid (Nunnaly, 1994).

Table 1: Respondents' feedback on changes in pay and productivity

	Frequency		Percent (%)	
	YES	NO	YES	NO
C17.The wages I received should reflect my productivity level.	616	194	76	24
C18.If wages are increased, I would be willing to work harder.	785	25	97	3
C19.Annual wage increase should be linked to productivity improvements.	719	91	89	11
C16. Does the point system encourage you to perform better in your work?	609	201	75	25

Table 1 provides further information about respondents' feedback on their pay and productivity. The findings demonstrate that respondents claimed to be willing to be more productive should their wages be increased. Regarding productivity level, most respondents agreed that their salary would reflect their productivity. Ninety-seven

percent (97%) of the respondents claimed that they would be willing to work harder for increased wages. Eighty-nine percent (89%) of respondents agreed that annual wage increase should link to productivity improvements. This further suggests that the NMW implementation would enhance their productivity. In Malaysian hotels, employees are mostly accustomed to the use of service points system which boosts their base salary. The employers' survey showed concern over service point system that was predicted to not be sustainable beyond the introduction of the NMW. This study has proven that point system is an important factor as most employees claim that the points system encouraged them to perform better at work (75%). The illustration in Figure 2 below further proves that service points had the most influence on productivity. 89% of the respondents claimed to be positively influenced by the service points. Other factors that affect motivation and productivity are work culture, bonuses, and promotions, the relationship with co-workers, training, job scope, employers, technology and management support.

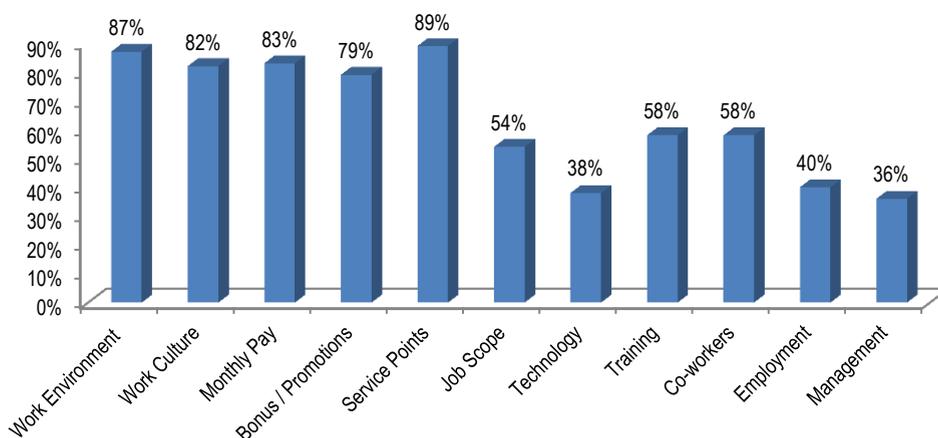


Fig. 2. Factors that positively influence productivity

The findings in Figure 2 above further verified that respondents understand the concept of productivity and approve to the idea that their wages should reflect their productivity as they are willing to work harder with salary increment. Supported by the findings of Saget (2000), Howard and Paska (2000) and Elangkovan (2012), where higher productivity can be improved and achieved with the wage increase, enhanced labor practices, especially in developing countries such as Malaysia (Howard & Paska, 2000).

In earlier research, Ball et al., (1986), Johnson & Ball (1989) and Jones & Lockwood (1989) contended that productivity is difficult to measure, especially in the service industry, where some output is not easily to be identified and measured. Djellal and Gallouj (2010) contended that the concept of service productivity itself is debateable as it is poorly measured and conceptualized inappropriately. Based on question 20 of the employees' questionnaire, respondents were asked to describe how they perceive the productivity measurement. The findings of this study reveal the respondents' unique understanding of the measurement of productivity according to their level of understanding and perception. Based on the employees' responses, it includes, improves self, own efforts to give more, doing more than what is expected, commitment, rewards, compliments from customers, positive feedback from customers, sensitivity to customers' needs. Other factors include the increase in the number of customers, acknowledgment, ability to solve customers' problems, courtesy, decreases in complaints, superior's feedback, follow job role and job description, efficiency, smooth operations, speed, a standard of work delivered, and meeting requirements. These responses, clustered into three themes, namely: motivation; customer satisfaction; and performance standards as demonstrated in table 2 below. While the employees' (rank and file) perception of the measurement of productivity provides a rather different outcome from the ideal idea of productivity, the factors quoted are relevant to the service industry's performance.

Table 2. Productivity measurement according to respondents according to theme

Efforts to improve self	
Own efforts to give more	
Rewards	MOTIVATION
Commitment	
Doing more than what is expected	
Compliments from customers	
Positive feedback from customers	CUSTOMER
Decreases in complaints	SATISFACTION
Customer increases	
Acknowledgement	
Able to solve customers' problems	
Courtesy	
Sensitive to customers' needs	
Superior's feedback	
Follow job role and description	PERFORMANCE
Efficiency	STANDARDS
Smooth operations	
Standard of work delivered	
Speed	

Employees also indicated that productivity is affected by job design. The empirical findings of McMahon (1994) and Riley (2000) confirmed that productivity in labour-intensive service industries and job design depends on each other. Consistent with the results of Kovach (1987), this study suggested that employees are more productive when they are given interesting jobs, appreciated and accepted by their employers—more so than by the wages they receive, though the reward itself reflects the level of organizational support for the employees.

5. Conclusion

It can reasonably be hoped, therefore, that the implementation of the NMW will cause employees to be more productive. Employees were willing to respond positively, if wages are increased, to the changes in HR practices affecting productivity and motivation in which accord with the findings of Saget (2000) and Howard and Paska (2000). Employees also indicated that productivity is affected by job design. The empirical findings of McMahon (1994) and Riley (2000) confirmed that productivity in labour-intensive service industries depends very much on how a job is designed. Consistent with the findings of Kovach (1987), this study suggested that employees are more productive when they are given interesting jobs, appreciated and accepted by their employers—more so than by the wages they receive, though the reward itself reflects the level of organisational support for the employees. As this study aimed to explore the anticipated effects of NMW on employees' productivity, we conclude that it is important for employers to motivate employees both intrinsically and extrinsically in order to sustain employees' productivity hence overcoming the cost impact of the NMW. Future research could be undertaken in considering the investigation of the NMW effect on Productivity during its first 3 years of implementation as employees might develop new perceptions over the years. A comparative study between results from this research can be compared to the future research where the NMW has been in effect.

References

- Acur N., Englyst L. Assessment of strategy formulation: how to ensure quality in process and outcome. *International Journal of Operations & Production Management* 2006; Vol. 26: 69-91.
- Aminuddin, M. (2006). *Malaysian Industrial Relations and Employment law* (5th edition):Mc Graw Hill.
- Anderson E. W., Fomell C., Rust R. T. Customer satisfaction, productivity, and profitability: Differences between goods and services. *Marketing Science* 1997; Vol. 129-145.
- Ball, S. D., Johnson, K., & Slattery, P. (1986). *Labour productivity in hotels: an empirical analysis*. *International Journal of Hospitality Management*, 5(3), 141-147.
- Brown, D., & Crossman, A. (2000). Employer strategies in the face of a national minimum wage: an analysis of the hotel sector. *Industrial relations journal*, 31(3), 206-219.
- Brown, J. R., & Dev, C. S. (1999). Looking beyond RevPAR: productivity consequences of hotel strategies. *Cornell Hotel and Restaurant Administration Quarterly*(April), 22-23.
- Card, D., & Krueger, A. B. (1995). *Time-series minimum-wage studies: a meta-analysis*. *The American Economic Review*, 238-243.
- Dixon, J. R. (1990). *The new performance challenge: Measuring operations for world-class competition*. Irwin Professional Pub.
- Djellal F, Gallouj F (2010) Beyond productivity strategies in services". *J Innov Econ* 5(1):89–104
- Drucker P. F. Managing for business effectiveness. *Harvard Business Review* 1963; V
- Elangkovan, K. (2012). *Minimum wage laws in Malaysia: An answer to the increasing rate of unemployment*, *International Journal of Academic Research in Economics and Management Sciences*, 1(5), p. 135-146
- Fitzsimmons, J. A., & Fitzsimmons, M. J. (1998). *Service management: Operations, strategy and information technology*. In Irwin-McGraw Hill (Ed.). Boston.
- Goh, S. K., & Wong, K. N. (2010). *Analyzing the productivity-wage-unemployment nexus in Malaysia: Evidence from the Macroeconomic Perspective*. *International Research Journal of Finance and Economics*(53).
- Guerrier, Y. a. A., Lockwood. (1989). Managing flexible working in hotels. *Service Industries Journal*, 8(3), 406-419.
- Hemdi, M. A., Nasurdin, A. M., & Ramayah, T. (2003). Investigating the influence of organizational justice on hotel employees' organizational citizenship behavior intentions and turnover intentions. *Journal of Human Resources in Hospitality & Tourism*, 7(1).
- Hoque, K. (1999a). Human resource management and performance in the UK hotel Industry. *British Journal of Industrial Relations*, 37(3), 419-443. doi: 10.1111/1467-8543.00135
- Hoque, K. (1999b). New approaches to HRM in the UK hotel industry. *Human resource management Journal*, 9(2), 64-76. DOI: 10.1111/j.1748-8583.1999.tb00197.x
- Howard, G., & Paska, J. (2000). *The PNGTUC Submission to the 2000 MWB*. 2000 MWB Proceedings, Port Moresby.
- Imbun, B. Y. (2008). *Dynamics of wage fixation in a developing economy: The case of Papua New Guinea*: Nova Science Publishers.
- Johnson, K., Ball, S., Witt, S., & Moutinho, L. (1989). *Productivity measurement in hotels*. *Tourism marketing and management handbook*., 319-323.
- Jones, P., & Lockwood, A. (1989). *The management of hotel operations*: Cassell Ltd.
- Kaplan R. S., Norton D. P. The balanced scorecard: translating strategy into action, Harvard Business school press; 1996.
- Kirikal L., Tallinna T. Productivity, the Malmquist index and the empirical study of banks in Estonia, Tallinn Technical University Press; 2005
- Kovach, K. A. (1987). What motivates employees? Workers and supervisors give different answers. *Business Horizons*, 30(5), 58-65.
- Levantis, T. (2000). *Papua New Guinea: employment, wages and economic development*. Asia Pacific Press, Canberra.

Lucas, R. (1991). Remuneration practices in a wages council sector: Some empirical observations on hotels. *Industrial Relations Journal*, 22(4), 273-285.

McGavin, P. A. (2001). *Labour transformation in Papua New Guinea*: Institute of National Affairs.

McMahon, F. (1994). *Productivity in the hotel industry*. In Wiley (Ed.), In A. V. Seaton (Ed.), *Tourism: The State of the Art* (pp. 616-625). Chichester, England.

Mill, R. C. (2008). *Managing labour productivity*. Handbook of hospitality operations and IT, 269.

Mohd, I. H. (2013). *MINIMUM WAGE AND HR PRACTICES: THE PERSPECTIVE AND IMPLICATIONS FOR THE MALAYSIAN HOTEL INDUSTRY* (Doctoral dissertation, Flinders University).

Nasuridin, A. M. (2001). Procedural justice, perceived organizational support, organizational commitment, and organizational citizenship behavior among hotel employees. *Unpublished PhD thesis. Universiti Sains Malaysia, Penang*.

Neely, A., Gregory, M., & Platts, K. (1995). Performance measurement system design: a literature review and research agenda. *International journal of operations & production management*, 15(4), 80-116.

Ninth Malaysia Plan 2006-2010. *Percetakan Nasional Malaysia Berhad, Kuala Lumpur*.

Nunnally, J. C., & Bernstein, I. (1994). *Psychological theory*: New York: McGraw-Hill.

Organization A. P. In-country Training Program for Productivity and Quality Practitioners In IRAN. 2008.

Pavesic-Skerlep, M., & Tandberg, E. (2009). *Advanced public financial management reforms in South East Europe*: International Monetary Fund.

Pickens, D. (2006). *Productivity-the wider context*. Chartered Accountants Journal, 85(3), 18.

Phillips, P., & Appiah-Adu, K. (1998). Benchmarking to improve the strategic planning process in the hotel sector. *Service Industries Journal*, 18(1), 1-17.

Price, L. (1994). Poor Personnel Practice In the Hotel and Catering Industry: Does It Matter? *Human Resource Management Journal*, 4(4), 44-62. doi: 10.1111/j.1748-8583.1994.tb00351.x

Pritchard R. D. *Productivity measurement and improvement: Organizational case studies*, Greenwood Publishing Group; 1995.

Rantanen H. The effects of productivity on profitability: a case study at firm level using an activity-based costing approach. LTKK Tieteellisiä julkaisuja-Research Papers 1995

Rantanen H., Kulmala H. I., Lönnqvist A., Kujansivu P. Performance measurement systems in the Finnish public sector. *International Journal of Public Sector Management* 2007; Vol. 20: 415-433.

Riley, M. (2000). *Managing People: A Guide for Managers in the Hotel and Catering Industry*: Butterworth-Heinemann.

Saget, C. (2000). *Can the level of employment be explained by GDP growth in Transition Countries (theory versus the quality of data)*, ILO Development Policy Group. ILO, Geneva.

Saget, C. (2001). *Minimum wage-Does it cut poverty*. ILO, 2004, 111-115.

Sigala, M. (2003). The information and communication technologies productivity impact on the UK hotel sector. *International Journal of Operations & Production Management*, 23(10), 1224-1245.

Sigala, M. (2004). Using data envelopment analysis for measuring and benchmarking productivity in the hotel sector. *Journal of Travel & Tourism Marketing*, 16(2-3), 39-60.

Sigala, M., Jones, P., Lockwood, A., & Airey, D. (2005). Productivity in hotels: a stepwise data envelopment analysis of hotels' rooms division processes. *The Service Industries Journal*, 25(1), 61-81.

Serdar Durduev, Ali Ihtiyar, Syuhaida Ismail, Fauziah Sh. Ahmad, and Nooh Abu Baka (2014), "Productivity and Service Quality: Factors Affecting in Service Industry", 2nd World Conference on Business, Economics and Management, Volume 109, 8 January 2014, Pages 487-491. doi:10.1016/j.sbspro.2013.12.494

Sekaran, U. (2002). *Research methods For business*. New York: John Wiley & Sons, Inc.

Schroeder, R. G. (1985). *Operations management: Decision making in operation function* (2nd ed.). New York.

Sedighi, M., & Mehrdad, A. G. (2014). The Productivity Indexes at Islamic Azad University, Hamedan Branch, Iran. *Procedia-Social and Behavior Sciences*, 131, 244-247.

Welch, F. (1993). *The Minimum Wage*. Jobs and Capital, 2.

Witt, C. A., & Witt, S. F. (1989). *Why productivity in the hotel sector is low*. *International Journal of Contemporary Hospitality Management*, 1(2).