

Considerations on Asset Management and Turnover Factorial Correlations: The Case of Dobrogea Region, Romania

Kamer-Ainur Aivaz

“Ovidius” University of Constanta, Faculty of Economic Sciences, Romania

kamer_aivaz@yahoo.com

Abstract

Analyzing business development in emerging economies has been a long time focus of theorists. Predilection for asset management or labor effectiveness may present a disparate progression in neighbor regions. This paper creates a snapshot of asset management predilection, labor evolution and turnover analysis in Dobrogea region with a correlative perspective of the two indicators. The methodology of our paper is a case study approach, with particular focus on context observation and quantitative analysis of operational and financial metrics. The comparison and contrasts between the two counties of Dobrogea identify interesting divergent issues and a growing concern for business knowledge awareness and sustainable development strategies.

Key words: asset management, factorial correlation, business efficiency

J.E.L. classification: J10, O12, P52

1. Introduction

The ever-changing economical context faces managers with multiple challenges and the need to adapt and overcome obstacles to help increase efficiency. Therefore, research brings value to business practice, by summarizing and integrating core findings from different professional areas into a system of “evidence-based management” (Schmidt, 2015, p.1-17). Improvement of compliance (Bird and Park, 2017, p. 315), enhancing collaboration, and unlocking information that leads to better managerial decisions (Munteanu, 2018, p.1251) channels business energy into financial efficiency.

The current study focuses on enhancing research in emerging economies (Munteanu and Mirea, 2017, p.554), choosing as area of interest the Dobrogea region of Romania. The land of Dobrogea presents a distinct interest in researching economic interdependencies because of its’ strategic geographical position and the contrasting economic business indicators of its’ two counties.

2. Literature review

Understanding the business reality and rejoicing demographic characteristics, business statistics and managerial knowledge into a systematic research may contribute to pave a way for economic wealth and constructive goal driven competition. Literature shows preoccupation for analysis of links and interdependencies between demographic importance and economic development in different parts of the world (Satterthwaite, 2006, p.13), with accents on the need for improvement of development planning (Momen, 2009).

The role of small towns and cities in developing countries has long been a preoccupation of theorists (Rondinelli, 1983, p.379; Owusu, 2008, p.454). The subject arose controversies over time regarding the limitation of development in poor countries or the appropriateness, scarce attention to rapid urbanization (Overman and Venebles, 2005), decisiveness of agricultural policies (Chouguill, 1989, p.267), or accountability of public governance (Munteanu et.al., 2020, p.2990).

Financial effectiveness and productivity measurement were also analyzed in close connection with human resource intervention (David, 2003), technological capabilities (Aboukorin, 2014) and urbanization (Bryan et.al., 2020). The role of human factors in asset management systems was identified as significant (Trevelyan, 2007), while other studies point to a further need to explore the role of human factors in asset management and financial efficiency (Reid and Xerri, 2013, p.76).

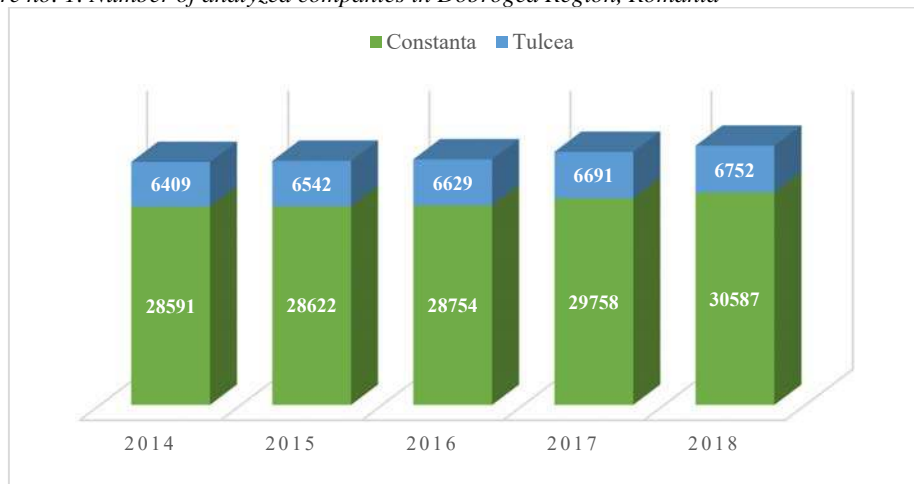
Operational productivity relies on vigilance in managing costs (Madu, 2000, p. 939-940), judicious allocation of budget and risk mitigation, attributes that have been defined in time by the concept of asset management. Efficient functioning of modern society relies heavily on physical assets (Malano et. al., 2005, p.108) and resourcefulness (Kosny and Piotrowska, 2019, p.427) of asset management.

3. Research methodology

Our research explored the available dataset and developed a valuable case study investigation, based on a comparative financial snapshot supervised by a statistical quantitative analysis of the operational and financial values of the two neighbor counties of Dobrogea, a Romanian region in the Balkans. A particular focus was set on the correlation between three main economic indicators: turnover, fixed assets and number of employees.

The current study investigates a series of financial indicators of a vast number of companies with headquarters in the Dobrogea Region, as shown in Figure 1. The data is processed based on the public data provided by Romania’s National Institute of Statistics (INSSE). The database is completed with financial indicators provided by Romania’s Public Finance Ministry. By combining information from the two institutions, we could obtain a valuable and documented snapshot of the financial evolution of turnover, labor indicators and incentives of the predilection for assets management in the Dobrogea region. The data includes active companies, with positive reported turnover during 2014-2018, with public, mixt or private ownership.

Figure no. 1. Number of analyzed companies in Dobrogea Region, Romania



Source: INSSE Romania

According to the data graphically presented in Figure 1, the number of companies acting in the analyzed region followed a growing trajectory during 2014-2018. Although the two counties of Dobrogea’s region, Constanta and Tulcea, have great potential of development, with strategic geographical position by the Black Sea, with direct access to the Danube River, one of Europe’s important rivers that connects the Black Sea to Germany, with territories favorable for agricultural flourishing or tourism boost, they don’t present the same predilection for business.

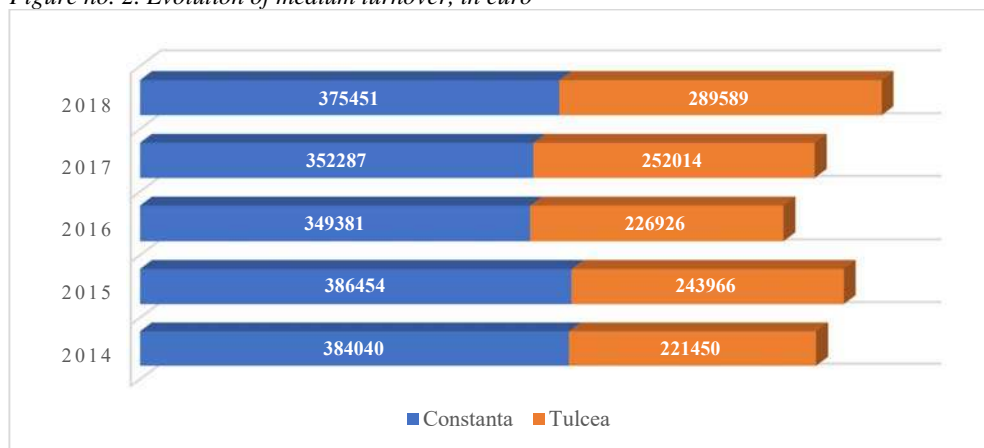
The number of operational companies in Constanta is significantly higher than the number of operating businesses in Tulcea, throughout the whole analyzed period. The comparison between the two counties shows interesting results when it comes to business, bearing in mind that the both counties have similar great business opportunities. From a numeric perspective, it seems that the

number of companies operating in 2018 Constanta increased with 1996 new activities compared to the year 2014, while the number of new companies in Tulcea rose with only 343 during the same period. The numeric representation of the two counties opened the interest to investigate new statistical financial barometers.

4. Findings

The investigated data broaden the image of operating businesses in Dobrogea region with a comparative approach on turnover generated by the acting companies in the targeted period of time. The available data allowed us to calculate an annual medium turnover for the operating companies in each county, as shown in Figure 2.

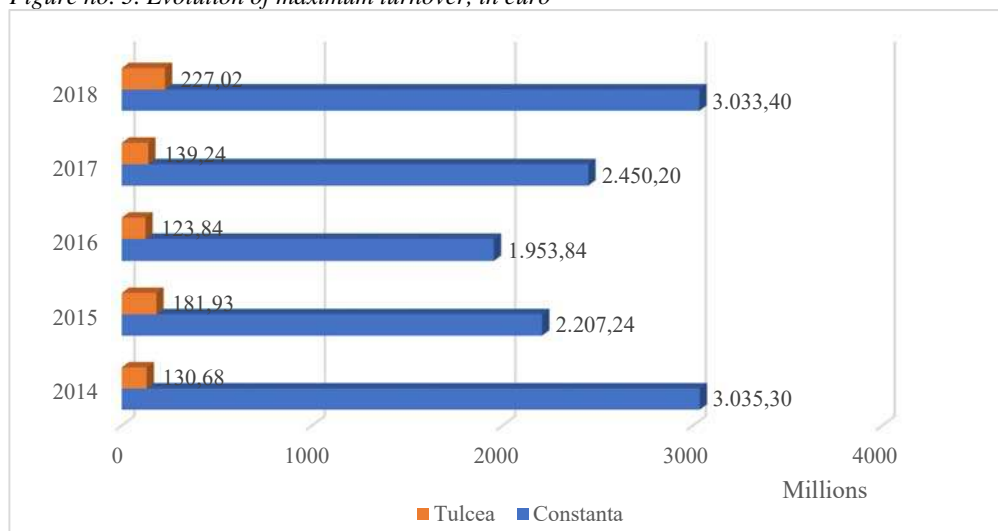
Figure no. 2. Evolution of medium turnover, in euro



Source: INSSE Romania

The calculated medium turnover followed a similar oscillatory trajectory in both counties and in the whole region of Dobrogea, during the same period of time. The medium turnover results presented in Figure 2 also point to a better operational financial result in Constanta compared to Tulcea. It seems that the companies with headquarters in Constanta are more efficient in developing and operating their business than their competitors in Tulcea.

Figure no. 3. Evolution of maximum turnover, in euro



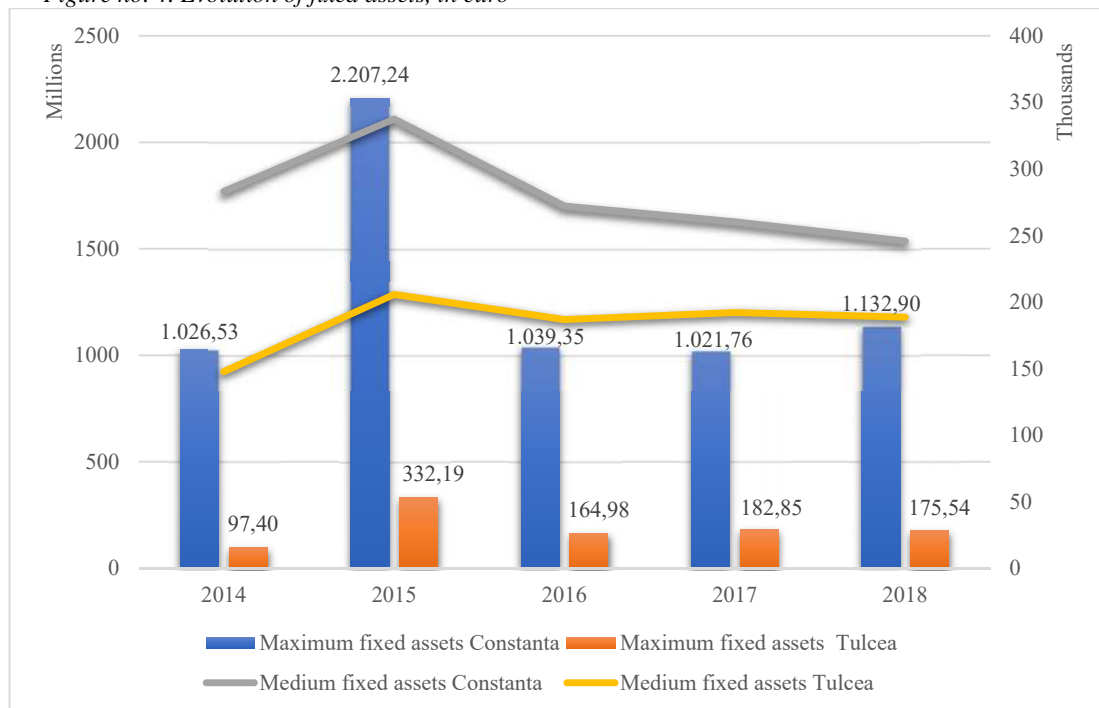
Source: INSSE Romania

A very interesting discrepancy regarding corporate efficiency between the two neighbor counties was revealed by the maximum turnover obtained by companies in each of the analyzed years, as presented in Figure 3. It seems that the maximum turnover obtained in Constanta in 2014 was 3035 million euros, while the maximum turnover obtained in Tulcea was 130 million euros. Similar significant discrepancies appear every year. The situation points to a need to further investigate the business conditions in each county and to substantiate which may be the most relevant factors that need to be improved in order for the two regions to be brought to a similar potential of economic development.

The analysis of assets management predilection conducted on medium fixed assets annual indicators and extreme values of assets is presented in Figure 4. Similar to the previous results, the medium fixed assets indicators reported by companies in Constanta are significantly higher than the medium assets reported by the competitor companies in Tulcea. The graphical representation in figure 4 reveals a boost in investments in 2015 in both counties, followed by a depreciation of assets during 2016. After 2016, the medium fixed assets indicators point to a slight upward trajectory of investment in Tulcea, whilst the fixed asset management follow a depreciation trend in Constanta.

According to the graphical representation of results in Figure 4, the fixed assets management predilection reveals maximum indicators in Constanta (2207 million euros in 2015) undoubtedly higher compared to the indicators reported in Tulcea (332 million euros in 2015). Nevertheless, during 2016-2018 the dataset point to a slight revival of investments in Tulcea that suggest a healthy economic concern for fixed assets efficient management.

Figure no. 4. Evolution of fixed assets, in euro

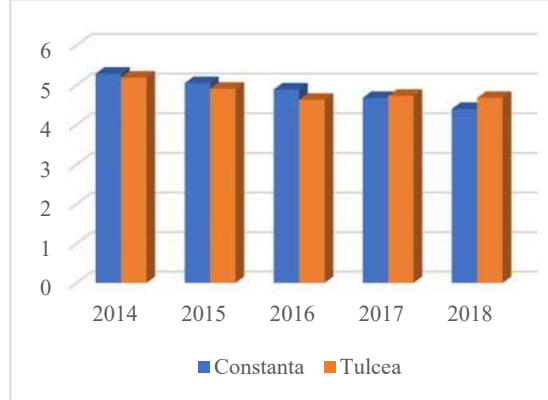


Source: INSE Romania

The results in the labor sector for the two counties in Dobrogea reveal an interesting situation. Figure 5 presents the evolution of the medium number of employees, while Figure 6 displays the maximum number of employees in Constanta compared to Tulcea.

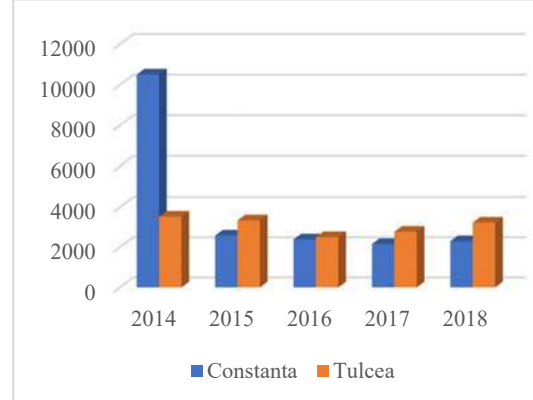
The medium trend of number of employees in Constanta point to a descending trajectory, different from the oscillating trend with increase slight tendencies of the same indicator in Tulcea. As per Figure 5, the medium number of employees in Constanta in 2014 in higher than in Tulcea, but the situation reverses in 2018 when the indicator calculated for Tulcea is higher. The situation suggests a better employment rate in Tulcea during the analyzed period.

Figure no. 5. Evolution of the medium number of employees



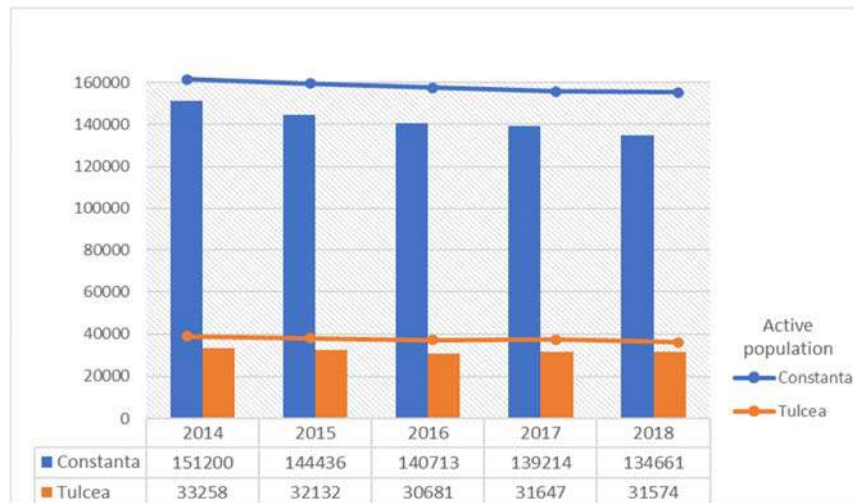
Source: INSE Romania

Figure no. 6. Evolution of the maximum number of employees



The conclusion indicated by Figure 5 seems to be supported by the representation of the evolution of the total number of employees in Dobrogea, in Figure 7. The number of employees in Constanta present a downward trajectory during the 5 analyzed years, leaving a greater rate of unemployment compared to Tulcea. Of course, the unemployment rates are also connected with the indicators for the active population, which present very different dimensions in the two counties. The graphical representation displays high occupancy in Constanta compared to Tulcea.

Figure no. 7. Evolution of the total number of employees in Dobrogea Region, Romania



Source: INSE Romania

In order to complete the comparison assessment, we conducted a correlation analysis between the relevant indicators presented above. First, we observed the correlation between the number of employees (EMP) and the value of the turnover (TO) reported by the number of analyzed companies in each of the two counties. Also, the correlation between the value of turnover (TO) and the value of fixed assets (FA) reported by the number of counties in each county was observed. The results are presented in Table 1.

Table no. 1 Correlation of financial indicators in Dobrogea region, Romania

Period	Correlation of EMP and TO		Correlation of TO and FA	
	Constanta	Tulcea	Constanta	Tulcea
2014	0.148	0.737**	0.760	0.566**
2015	0.370	0.825**	0.687	0.303**
2016	0.379	0.637**	0.773	0.393**
2017	0.280	0.565**	0.848	0.384**
2018	0.290	0.794**	0.850	0.460**

Source: Authors' analysis based on the INSE indicators

The correlation between the number of employees (EMP) in Constanta and the value of the reports turnover (TO) point to an insignificant correlation for the analyzed companies. The situation indicates that, in Constanta county, the number of employees in a company does not seem to have a decisive influence on the level of the reported turnover. Nevertheless, the strong correlation results between TO and FA suggests that in Constanta the value of the reported turnover is significantly influenced by the increase of fixed assets. The very high correlation values in 2017 (0.848) and in 2018 (0.850) signals that during this period the reported turnover value was highly connected with the reported fixed assets of the population of analyzed companies.

The correlation results are different in Tulcea and point to a stronger connection between the reporting of operational turnover and the number of employees, whilst the correlation between turnover and fixed assets values illustrates a lack of influence. It seems that in Tulcea the employees have a greater contribution to the achievement of the turnover, especially in 2015, where the correlation indicator of 0.825 indicates that the number of employees highly contributed to the achievement of operational turnover.

5. Conclusions

Our study captures a snapshot of the financial evolution of turnover, labor indicators and fixed assets in the Dobrogea region and assesses different business approaches in the two counties that bring valuable incentives on the discrepancies of economic development in the region. The results reveal that in Constanta county there are incentives pointing that the fixed assets management contributes to the achievement of operational turnover. In Tulcea, the financial results of companies rely more on employees than on fixed assets management. This may be a possible explanation for the difference in economic development between the two counties in Dobrogea, which although have similar demographic, agricultural, touristic potential reveal very different business indicators.

The investigated dataset that documented our findings include also public owned companies, which also contribute to the relevance of the results. The state contribution in Dobrogea is focused on strategical areas which are predominantly located in Constanta, so the results are influenced of these particular cases. Nevertheless, the large number of companies in Constanta compared to Tulcea points to a need to develop business strategies in both counties in order to bring knowledge to business and contribute to economic development.

Our research explored the available dataset and developed a valuable comparative financial snapshot supervised by a statistical comparative analysis of the two neighbor counties of Dobrogea that points to a need to further develop the empirical economic studies in the area. Our study strives to encourage research interests for the development of the Balkan region, bearing in mind the international consensus of the acting role of small cities and towns in poverty reduction and economic development.

6. References

- AbouKorin, A., 2014. *Small-size urban settlements: Proposed approach for managing urban future in developing countries of increasing technological capabilities, the case of Egypt*. Ain Shams Engineering Journal. 5. Doi:10.1016/j.asej.2013.12.001.
- Bird, R. C. and Park, S., 2017. *Turning Corporate Compliance Into Competitive Advantage*. University of Pennsylvania Journal of Business Law, Vol. 19, No. 2, 2017, Available at: <https://ssrn.com/abstract=2763348> [Accessed 22 October 2020].
- Bryan, G., Glaeser, E., Tsivanidis, N., 2020, *Cities in the Developing Worlds*, Annual Review of Economics, Vol. 12:273-297, Available at: <https://doi.org/10.1146/annurev-economics-080218-030303>.
- Choguill CL. *Small Towns and Development: A Tale from Two Countries*. Urban Studies. 1989;26(2):267-274. doi:10.1080/00420988920080231.
- David, J. H. 2003. *Identifying the factors that contribute to the effectiveness of the Productivity Measurement and Enhancement System (ProMES)*. 3141173, Texas A&M University, United States, Texas, [online] Available at: [/hdl.handle.net/1969.1/1162](http://hdl.handle.net/1969.1/1162). [Accessed 22 October 2020].
- Kosny, Marek & Piotrowska, Maria., 2019. *Economic Resourcefulness: Definition and Modeling*. Social Indicators Research. 144. p. 425-449. 10.1007/s11205-018-2048-3.
- Madu, C.N., 2000. *Competing through maintenance strategies*, International Journal of Quality & Reliability Management, Vol. 17, No. 9, p.937-949.
- Malano, H., George, B. and Davidson, B., 2005. *Asset management modelling framework for irrigation and drainage systems: principles and case study application*, Irrigation & Drainage Systems, Vol. 19, No. 2, pp.107-127.
- Momen, S., 2009. *Synergistic rural-urban development: The experience of the Rural-Urban Partnership Programme (RUPP) in Nepal*. International Development Planning Review. 31(3). Doi:10.3828/idpr.31.3.4.
- Munteanu, I., Mirea, M., 2017. *Efficiency in Corporate Governance – the Sustainability and Accountability Nexus*, Ovidius University Annals, Economic Sciences Series, XVII, 1, 551-555.
- Munteanu, I., 2018. *The Challenges of Performance Assessment in Romanian State-Owned Enterprises*, Challenging the Status Quo in Management and Economics, 1247-1259.
- Munteanu, I.; Grigorescu, A.; Condrea, E.; Pelinescu, E., 2020. *Convergent Insights for Sustainable Development and Ethical Cohesion: An Empirical Study on Corporate Governance in Romanian Public Entities*. Sustainability, 12, 2990.
- Owusu, George. (2008). *The Role of Small Towns in Regional Development and Poverty Reduction in Ghana*. International Journal of Urban and Regional Research. 32., p. 453-472. 10.1111/j.1468-2427.2008.00794.x.
- Reid, S. R. M., & Xerri, M. J., 2013. *The 'state of play' in engineering asset management: towards a conceptual frame*. International Journal of Engineering Management and Economics, 4(1), p. 72-83.
- Rondinelli, D. (1983). *Towns and Small Cities in Developing Countries*. Geographical Review, 73(4), 379-395. doi:10.2307/214328.
- Satterthwaite, D., 2006. *Outside the Large Cities The demographic importance of small urban centres and large villages in Africa, Asia and Latin America.*, p.13, Available at: <https://pubs.iied.org/10537IIED/>.
- Schmidt, F. L., 2015. *Select on intelligence*. In E. Locke (Ed.), Handbook of principles of organizational behavior: Indispensable knowledge for evidence-based management. New York: Wiley. p. 1-17.
- Trevelyan, J., 2007. *Technical coordination in engineering practice*, Journal of Engineering Education, Vol. 96, No. 3, p.191-204.