

Due to were taken LQ value expressing the agglomeration tendency of firms, firms having agglomeration tendency were coded as 1, firms not having agglomeration tendency were coded as 0. 21 firms in size-based and 43 firms cognitive-based are dominant firms showing agglomeration tendencies (table 4).

Table 4. The Number of Firms Surveyed in terms of human capital factors determined by factor analysis and LQ Score

	Scaling Factors	Cognitive Factors
LQ \geq 1	21	43
LQ $<$ 1	47	41

Lastly, it were comparatively analysed whether human and social capital variables have effects on agglomeration tendencies of firms. As mentioned above, the study aims to obtain the findings with logistic regression in respect of social and human capital potentials of the region for testing agglomeration tendencies of firms being characterized on size-based and cognitive-based factors in Konya manufacturing industry. As can be seen in table 5, the coefficient of logistic regression analysis in all models is statistically significant. In other words, all of statistical analyses describe the dependent variables of independent variables over amount 35 percent.

As expected, although human and social capital potential can be said to have a significant effect on agglomeration tendencies in Konya manufacturing industry, the statistical results show that some components of independent variables have not the effect on agglomerations. 'InfoBackground' and 'SkillBackground', for example, have not any effects on agglomeration tendencies for firms being size-based factors dominated in terms of human capital. However, concerning for example 'EmployBackground', 'PhysBackground' and 'HistBackground' for firms being size-based factors dominated in terms of human capital, the regression coefficients is positive values. The independent variables have impact on increasing to the dependent variables. A one-unit increase in 'EmployBackground', 'PhysBackground' and 'HistBackground' will lead to an increase the tendency to spatial agglomeration of firms about more than 1,5 times (2,291 times in EmployBackground, 1,731 times in PhysBackground, 1,632 times in HistBackground). It, therefore, can be said that human capital factors such as employment structure, physical conditions, and historical background of firms have an important role on spatially clustering of firms being firms being size-based factors dominated in terms of human capital in Konya. Also, it can be analysed that social capital components such as 'trust' and 'friend' have

positively a direct effect in agglomeration tendencies of the firms. As can be seen in the analysis results, it has been found cooperation atmosphere based on relations of trust and friendship in the region to be a determining factor in the spatial location of firms. Besides, there is a no significant effect on agglomeration tendencies of firms being size-based factors dominated in social capital components, as 'Interagent' and 'Memorg'. Namely, the intensity of actors such as intermediary agents, various club, groups, institutions and voluntary organization in Konya is not associated with spatial concentration of these firms (table 5).

The empirical results associated with firms being cognitive-based factors dominated in terms of human capital indicate that human and social capital potential of the region have importantly the effect on spatial concentration of firms since there is a significant relations between all components of human capital, except for 'PhysBackground', and firm location selection for firms being cognitive-based. However, the regression coefficients for 'InfoBackground' and 'HistBackground' are negative values. The independent variables have an impact on reducing the dependent variables. In other words, a one-unit increase in 'InfoBackground' will decrease about 1.661 (1/0.602) times and a one-unit increase in 'HistBackground' will decrease about 1.504 (1/0.665) times the agglomerations tendency of firms being cognitive-based factors. On the other hand, the empirical results indicate that neither 'Trust' as component of social capital, nor 'Friend' show directly any significant on the agglomeration tendencies of these firms in Konya. Notwithstanding, components of social capital such as 'Interagent' and 'Memorg' have positively a direct effect of district firm' agglomeration tendencies in Konya. One-unit increase in the variable 'Interagent' and 'Memorg' will affect more than two times (2,244 times and 2,162 times) the agglomeration tendencies of firms being cognitive-based factors dominated in terms of human capital. The variables, thus, seem to be of great use for the firms in Konya (table 5).

Table 5. The Relationship among Agglomeration Tendencies and Human and Social Capital Potential of Konya Manufacturing Firms

	Logistic Regression for Firms Being Size-Based Factors Dominated in terms of Human Capital				Logistic Regression for Firms Being Cognitive-Based Factors Dominated in terms of Human Capital			
	B	S.E.	Sig.	Exp(B)	B	S.E.	Sig.	Exp(B)
EmployBackground	,829	,389	,033	2,291	1,400	,427	,001	4,057
InfoBackground	,088	,282	,754	1,092	-,508	,271	,062	,602
SkillBackground	,139	,208	,504	1,149	,345	,122	,005	1,412
PhysBackground	,549	,271	,043	1,731	,280	,259	,280	1,323
HistBackground	,490	,254	,054	1,632	-,408	,250	,093	,665
Constant	-6,255	1,638	,000	,002	-2,676	1,271	,035	,069
	Omn. Model Coef.	Chi-square	Sig.		Omn. Model Coef.	Chi-square	Sig.	
	Step	27,634	,000		Step	30,380	,000	
	Block	27,634	,000		Block	30,380	,000	
	Model	27,634	,000		Model	30,380	,000	
	-2 Log LH.	Cox & Snell R²	Nagelkerke R²		-2 Log LH.	Cox & Snell R²	Nagelkerke R²	
	56,436	,334	,471		86,021	,303	,405	
	B	S.E.	Sig.	Exp(B)	B	S.E.	Sig.	Exp(B)
Trust	,609	,278	,028	1,839	,041	,195	,833	1,042
Friend	,972	,314	,002	2,645	,235	,207	,257	1,265
Interagent	-,215	,267	,422	,807	,808	,285	,005	2,244
Memorg	,055	,248	,826	1,056	,771	,226	,001	2,162
Constant	-5,764	1,940	,003	,003	-4,401	1,165	,000	,012
	Omn. Model Coef.	Chi-square	Sig.		Omn. Model Coef.	Chi-square	Sig.	
	Step	19,229	,001		Step	28,675	,000	
	Block	19,229	,001		Block	28,675	,000	
	Model	19,229	,001		Model	28,675	,000	
	-2 Log LH.	Cox & Snell R²	Nagelkerke R²		-2 Log LH.	Cox & Snell R²	Nagelkerke R²	
	64,840	,246	,367		87,726	,289	,386	

DISCUSSION AND CONCLUSION

As mentioned above, aim of this paper is to explore the empirical evidence the effect of human and social capital on agglomerations of manufacturing firms. More specifically, in empirical case study has been examined the relations between human and social capital potential and agglomeration tendencies of firms in Konya. As expressed theoretical backgrounds, agglomerations could be characterized within the bounds of possibility offered by human and social potential of a region. It, thus, can be said that firms not only can use the existing resources and opportunities of the region, but also would like to use the new information resources collected by local institutions, association, NGO, social networks

being in the region. Thus, when gathering of economic activities in a specific place are explained in terms of various advantages of places which are emphasized on agglomeration and urbanization economies, economic approaches such as income distribution, affecting regional development disparities, externalities which will occur as a result of gathering firms related each other in same place, environmental factors and to benefit from incentive features were handled with non-economic approaches such as human and social capital.

Agglomeration of economic activities can be evaluated as a result of learning process with information exchange, interaction among firms, mutual dependence among actors. It is necessary to coexist spatially new competition advantages such as increasing mutual dependence of firms, transferring technology, information spillover and innovation and perform dependent using common place (Asheim, 1996; Malmberg, 1996). Cooperation and ability to act jointly is depend on social strength that is multitude of socio-psychological values such as common culture, social relations, solidarity networks, individual connections, trust, and faith of strength communication among firms and institutions (Amin, 1999; Steiner, 1998). These values provide not only firms to integrate with human capital component such as information, skill and experience easily but also qualify existing human capital potential. Therefore regions being rich in terms of social and human capital potential, geographic and historical accumulation make an attractive effect on agglomeration of economic activities.

Analyses in case of Konya manufacturing industry showed that firm's human and social capital potential have a decisive influence in agglomeration process in specific area of firms. Spatial conditions such as region' embedded information, local institutions and associations, research infrastructure and culture, information potential, codified information level and production culture has strengthened the firms' innovative and competitive structure (Crewe, 1996; Molina-Morales, 2005). However, spatial behaviour patterns are different from others according to human capital elements. For example, it was identified that structural elements such as region's employment structure, physical and technological opportunities and historical accumulation are determinant in firms' agglomeration process of the firms which are defined according to size-based factors. In other words, firms being size-based factors are in agglomeration tendency with using opportunities presented by location economies since localization is associated with knowledge spillovers within a region (Marshall, 1920). Thus, it is to cause of agglomerations the presenting positive externalities in terms of workforce opportunities,



consisting alternatives in terms of supplier and customer and advantages occurred by historical accumulation.

Agglomeration process of economic activities is a complex situation so it cannot be explained only with human capital elements. Because advantages presented by local economies can transform economic output with the nature of networks among actors. Agglomeration tendencies of actors are explained with networks among actors such as deep relationship and cooperation (Porter, 1998), multi-actors and mutual dependence (Rosenfeld, 1996), relevant and supportive institutions (Feser, 1998). Because complex social relationship networks occurred in specific area provide the success of firms with densifying production, information and cooperation networks in spatial level. In case of Konya, we can be said that these socio-cultural elements have a decisive effect on agglomeration tendencies of firms. As seen in the analyses, it was identified that bonding social capital elements such as trust and friendship relations are decisive in agglomeration tendencies of firms being size-based factors. Therefore, it can be the relationships among actors showing homogeneous features to determine agglomeration tendencies in firms which are dominant in terms of size-based factors.

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In contrary, agglomeration tendencies of firms being dominant in terms of cognitive-based factors show differences in terms of both human capital and social capital potential. In agglomeration tendencies of the firms are more decisive the relationships with actors which have different roles than the relationships among homogenous groups. In other words, regions which have different information channels and sources have an effect on firms' agglomeration tendencies. Because firms would like to be more competitive and innovative for articulating global networks and these basic way is to have the potential mechanism to modernize and develop local information. Therefore, firms in which cognitive-based factors are dominant would like to be in regions in which they can reach new information sources easily. Desire for articulation to these social networks of firms being dominant cognitive-based factors brings about using opportunities of region's human capital and information infrastructure. Although the nature of human capital and information infrastructure of the region and articulation ability to the sources of social networks are a separate study, it can be said that firms being cognitive-based can attribute a meaning to space with willing to use more qualified networks and human capital referring to knowledge/information, ability, skill and capacity in spatial tendency of the firms. In other words, firms that are gathering as

spatial have tendency to give a meaning to place in the context of their own dynamics and potentials.

In conclusion, Konya was to be manufacturing industry focus as a result of the advantages of location and urbanization economies. However, the possible contribution on sustainable regional development with having more competitive and innovative structure of manufacturing industry in Konya can be explained with socio-cultural and socio-economic potentials provided by space. Therefore, space presenting positive advantages for several production organizations with geographic and historical accumulation has brought up the agglomeration processes in Konya which are rich information in terms of human and social capital. In other words, specialization level and network type organization potential increase mutual dependence in firms and enforce to gather together with new competitive advantages such as technology transfer, information spill-over, and innovation. However, when thinking that this study is based on empirical and statistical method, obtained outputs should be tested with the studies which will be made descriptive and in-depth. Because the studies on the meaning of agglomeration tendencies on abstract concepts such as social capital, information-ability and experience with quantitate methods can lead to methodological problems or faults.

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Resume

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