

# “Competitive interaction: nature, volume and patterns of generic competitive actions executed by the three largest mobile telecommunication network operators in Turkey”

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## ARTICLE INFO

Okechukwu Lawrence Emeagwali and Cemal Çalicioğlu (2014). Competitive interaction: nature, volume and patterns of generic competitive actions executed by the three largest mobile telecommunication network operators in Turkey. *Problems and Perspectives in Management*, 12(1-1)

## RELEASED ON

Tuesday, 01 April 2014

## JOURNAL

"Problems and Perspectives in Management"

## FOUNDER

LLC “Consulting Publishing Company “Business Perspectives”



NUMBER OF REFERENCES

0



NUMBER OF FIGURES

0



NUMBER OF TABLES

0

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## Competitive interaction: nature, volume and patterns of generic competitive actions executed by the three largest mobile telecommunication network operators in Turkey

### Abstract

The purpose of this study is to understand the volume of generic competitive actions initiated or executed by the three major mobile telecommunications operators in Turkey, as well as the nature of these actions and the observable patterns with which they were carried out within a 10-year period. The study is the third in a series of studies aimed at completely mapping the competitive dynamics of the mobile telecommunications network operating industry. It adopts a mixed method approach leaning more towards the qualitative than quantitative method of social science research inquiry, as it builds upon findings from the second study in the series in a bid to shed more light into the very nature of competitive actions carried out by each of the firms under study, the resources they depended upon to carry them out and most importantly, the volume of generic competitive action each of the firms accounted for in their interaction with rivals during the time period under study. The findings revealed that all three companies were more likely to carry out generic action types of the 'Bring about' category than any other generic action type. Also financial resources accounted for the major resource upon which the firms observed depended for the initiation and execution of these actions. These and much more observations were found to be of immense value to the present body of literature and to both industry and non-industry stakeholders.

**Keywords:** competition, competitive interaction, action based research, competitive dynamics, marketing, competitive intelligence, business, management, competitive strategy, strategy, strategic management.

**JEL Classification:** D21, L10, L25, L86, M10.

### Introduction

In hypercompetitive industries such as the telecommunications industry, knowledge of the nature of competitive interaction and industry specific competitive actions are fundamental to surviving and outperforming competitors. While this knowledge is of immense importance to managers within the industry, it is also of value to non-industry stakeholders for instance, corporate investors on a mission to expand their investment portfolios through diversification into related or non-related industries. In their decision-making processes these corporate investors need to understand not only the degree of competition within the industries they intend to invest in, but also the ramifications of a particular competitive action taken by a rival firm within the industry in terms of competitive advantage and profitability. A comprehensive review of the competitive dynamics literature traces the origins of the inquisition into the competitive nature of industries to the pioneering work of Joseph Schumpeter upon which the Austrian School of Economics was founded (Jacobson, 1992). The crux of Schumpeter's work is evident in his postulation that firms operating within a particular market are in constant interaction with one another as they vie for competitive advantages within the industry through the initiation, execution or response to the competitive actions of their rivals aimed at creating and destroying temporary competitive advantages,

thus preventing markets from ever attaining a state of equilibrium (Schumpeter, 1950; Nokelainen, 2010; Turgay & Emeagwali, 2012). Thus, taking a cue from the theoretical view point of researchers within the Austrian School of Economics, competitive dynamics researchers sought to understand how competitive advantages are acquired, sustained and eroded in different industries, spurring such research streams as strategy as action, competitive interaction and action repertoires among a host of others (Smith & Grimm, 1991; Smith et al., 1992; Olivia, Day & MacMillan, 1988; Chen et al., 1992; Nokelainen, 2010; Emeagwali & Çalicioğlu [Working paper]). However, despite the importance of examining the competitive landscape of industries from an action-based perspective, extant body of literature had traditionally suffered from limitations stemming from the scope of industries and geographic regions covered (Nokelainen, 2010, Emeagwali & Çalicioğlu [Working paper]). In his very detailed conceptual work on the typology of competitive actions, Nokelainen (2010) noted that extant literature had focused almost entirely on understanding the competitive dynamics of a handful of industries of which as at 2010, the US automobile industry and the US airline industry accounted for more than half of the industries studied. He also noted that almost all of the industries studied were located in North America. Thus findings from these studies were more in tune with the realities of the industries studied and reflected the peculiarities of the environmental and economic conditions of developed nations, and thus in addition to contributing to extant literature, were more useful

to industry practitioners within the industries studied and the demographic regions within which they were studied (Emeagwali & Çalicioğlu [Working paper]). Secondly, Nokelainen (2010) noted that the studies focused on understanding the competitive dynamics of such industries by first determining the industry specific competitive actions within these industries and then examining the relationships between their characteristics and certain aspects of firm performance.

### 1. Generic actions

As mentioned in the opening segment of this research paper, while findings from extant literature were of importance to industry practitioners within the individual industries covered, they were of very little importance to non-industry practitioners (Emeagwali & Çalicioğlu [Working paper]). This was as a result of the fact that descriptions and classifications of competitive action types varied from industry to industry, and to even complicate things further, studies conducted within the same industry by different researchers provided competitive action typological classifications that were different one from the other based on the research orientation of the researcher(s) in question (Nokelainen, 2010). Noting this deficiency in extant literature, Nokelainen (2010) proceeded to develop a generic typology of competitive actions for use in the transformation of industry specific actions isolated by competitive dynamics researchers, into action types that were of a generic nature. In other words, a coding sheet was developed with which industry specific competitive actions isolated for a particular industry could be transformed into a generic form easily interpreted and understood in plain language by both industry practitioners and non-industry practitioners alike.

Despite these recent developments in the competitive dynamics literature, the gaps in literature – especially the fact that extant studies are limited to a few industries and geographic regions, still does exist along side the fact that with the exception of the empirical analyses carried out by Nokelainen (2010) to test his generic action typological code-sheet, there is no other study in extant literature that focuses on mapping the competitive action and response types within an industry using a standardized theory-derived generic action typology. In a bid to contribute to the plugging of this fundamental gap in literature, a series of studies were initiated by the first author of this paper as a crucial part of his doctoral dissertation aimed at completely mapping the competitive dynamics of the mobile telecommunications network operating industry, taking for the first time, as a case study, evidence from Turkey – an emerging market included among the CIVETS – a group of important

emerging economies recognized in 2009 by the Economist Intelligence Unit. In the ensuing section, a brief overview of the Turkish mobile telecommunications network operating industry and the three major operators within it will be presented.

### 2. Brief overview of the Turkish mobile network operating industry and key operators

In its 2013 report presenting the second quarter market data for the Electronic Communications Market in Turkey, the Information and Communications Technologies Authority (ICTA) stated that as at the time of the report, Turkey had a total of 68 million mobile subscribers which directly translates into an 89 percent penetration rate considering the nation's latest population estimates of approximately 80,694,485 – a July 2013 estimate provided by the CIA World Factbook. Of the total mobile subscriber base, over 45 million of them are subscribed to 3G network services (ICTA, 2013). The ICTA report also stated that as 2013, the market is dominated by three major telecommunication network operators: Turkcell, A.S., Vodafone TR and Avea A.S., each accounting for 50.96%, 28.62% and 20.42% of the total market share respectively when taken from the perspective of the volume of subscribers each operator services (ICTA, 2013). Also it was observed that Turkcell A.S. still maintains a lead over its two main competitors in terms of annual revenues generated, as it accounted for 48.72% of the total revenues generated within the industry, while Vodafone TR, and Avea A.S., accounted for 30.15% and 21.13% of the total revenues generated within the industry respectively (ICTA, 2013). The significance of the choice of this particular industry is the fact that the mobile telecommunications network operating industry has become fiercely competitive over the past decade, and is a key industry that contributes a lot to the GNP of nations (Turgay & Emeagwali, 2012). Also, the significance of the choice of Turkey as the geographic region to be studied stems from the fact that a large portion of the growth in the global economy after the 2008/10 recession originated from emerging economies belonging to the BRICS and CIVETS nations of which Turkey is a member of the latter (The Economist, 2009).

As mentioned earlier on, a series of studies were initiated to completely map the competitive dynamics of this industry for reasons earlier stated. This study is however, the third installation of the series of studies. The first research installation focused on understanding the types of industry-specific competitive actions peculiar to the Turkish mobile telecommunications network operating industry,

while the second research installation focused on providing a generic version of the industry-specific action types, by treating them to Nokelainen's (2010) generic action typology code-sheet. While the findings of the second research installation provided more useful information regarding the industry specific action types discovered especially for non-industry stakeholders, this research work – the third research installation in the series, seeks to provide an even more comprehensive and more useful information for both industry and non-industry stakeholders as it examines the distribution of the generic action types isolated for the industry. Nokelainen (2010) noted that such information is very useful to industry stakeholders by not only providing them with information on the average competitive action or response a firm is likely to take, but also helping them establish relationships between the most frequent competitive actions taken by rival firms and the key resources upon which such firms relied in order to initiate the observed actions. For non-industry stakeholders, this information aids them in monitoring the industry and understanding the implications of actions taken by key competitors within the industry on the profitability and indeed survival of the firm or business unit they possess within that industry, thus providing them with important information upon which to base investment, diversification and retrenchment decisions.

In a bid to provide this information, this third research installation posed the following research question: In what proportion are generic competitive actions carried out by each of the three Turkish mobile telecommunications network operators?

### 3. Methodology

Methodologically, the study being a third in the series was carried out by first adhering to the competitive dynamics research tradition of isolating industry specific competitive actions from publicly available news sources, using a structured content analytic procedure (Emeagwali & Çalıcıoğlu [Working paper]). Publicly available news sources used here included the *Hurriyet Daily* and the *Turkish Zaman* newspapers which were retrieved from the LexisNexis digital database in 2012, covering a period of 10 years (Emeagwali & Çalıcıoğlu [Working paper]). This uncovered a total of 112 industry specific actions. Secondly, these actions were then treated to Nokelainen's (2010) generic action typology which generically categorized action types into eight elementary action categories viz: 'Bring about', 'Forbear to bring about', 'Suppress',

'Forbear to Suppress', 'Preserve', 'Forbear to preserve', 'Destroy', and 'Forbear to destroy', and categorized the resources upon which these elementary actions are based into eight categories namely: 'Financial resources', 'Physical resources', 'Legal resources', 'Human resources', 'Organizational resources', 'Informational resources' and 'Product attributes' (Emeagwali & Çalıcıoğlu, 2014). After treating the industry specific action types with Nokelainen's (2010) generic typology code-sheet, the actions were transformed into generic action categories conforming to six elementary action categories which depended on eight key resources for their initiation and execution (Emeagwali & Çalıcıoğlu, 2014). This research work thus is built on the findings of these two previous research installations by further transforming the research data presented in the second research installation through a critical analysis of the proportion of the total generic actions isolated that were initiated or executed by each of the three major operators in Turkey through the subjection of these generic actions to descriptive statistics using the IBM Statistical Package for the Social Sciences (SPSS). The ensuing sections provide a short presentation of the findings.

### 4. Findings

The previous research installation in the series provided a snapshot of the generic action types obtainable within the Turkish mobile service providing industry (Emeagwali & Çalıcıoğlu, 2014). After conducting a critical analysis of these generic action types observed, this third research installation, sheds more light on the distribution of these generic actions among Turkcell A.S., Vodafone TR and Avea A.S. – the three major mobile telecommunications network operating industry beginning with the observed proportionality with which Turkcell A.S. carried out such actions.

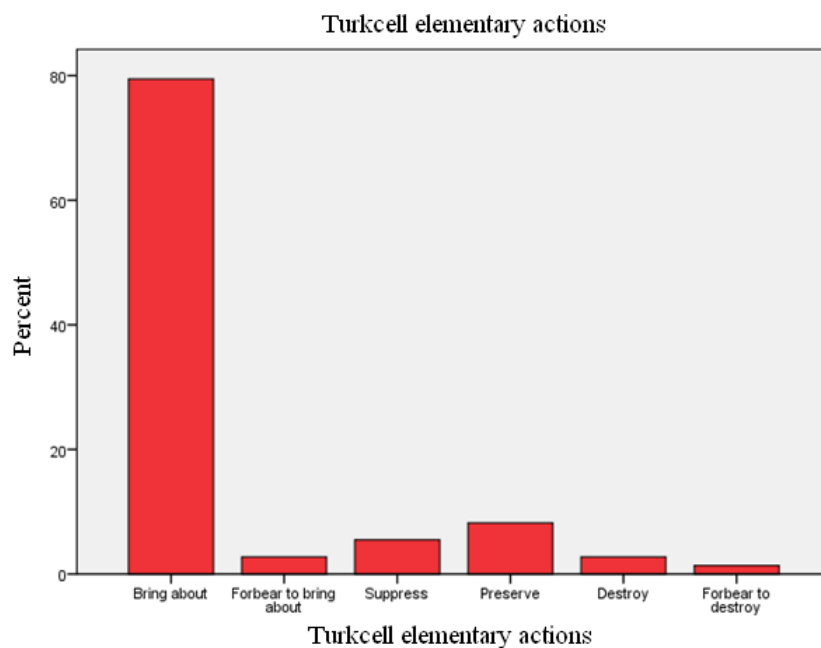
**4.1. Proportion of elementary actions carried out by Turkcell A.S.** All six elementary action types isolated in the second research installation and unique to the Turkish mobile telecommunications service providing industry, were fully represented in the generic actions recorded for Turkcell A.S. Of these actions, as with the industry wide viewpoint, majority of the competitive actions carried out by Turkcell were of a 'Bring about' elementary nature due to the fact that these actions represented about 80% of all the actions carried out by Turkcell within the 10 year focus period of this study.

Table 1. Distribution of elementary actions for Turkcell A.S.

		Frequency	Percent	Valid percent	Cumulative percent
Valid	Bring about	58	79.5	79.5	79.5
	Forbear to bring about	2	2.7	2.7	82.2
	Suppress	4	5.5	5.5	87.7
	Preserve	6	8.2	8.2	95.9
	Destroy	2	2.7	2.7	98.6
	Forbear to destroy	1	1.4	1.4	100.0
	Total	73	100.0	100.0	

Figure 1 illustrates this observation and clearly shows that the second most frequently carried out elementary action by Turkcell A.S. was actions

which aimed to preserve its competitive position or interests, followed by actions aimed at suppressing events or rival actions detrimental to its interests.



Note: No actions with the nature: forbear to suppress or forbear to preserve were observed for Turkcell A.S.

Fig. 1. Distribution of elementary actions for Turkcell A.S.

**4.2. Resource domains upon which Turkcell A.S. depends for action initiation.** All of the actions recorded for Turkcell were dependent on all eight resource domains. However, again in line with the highly competitive industry environment, most of

Turkcell's competitive actions depended on 'Financial resources' followed by 'Product attributes' and 'Legal resources'. Organizational resources also accounted for about 6.8% of all of Turkcell's competitive actions.

Table 2. Turkcell's resource domain distribution

Valid	Financial resource	19	26.0	26.0	26.0
	Physical resource	8	11.0	11.0	37.0
	Legal resource	16	21.9	21.9	58.9
	Human resource	2	2.7	2.7	61.6
	Organizational resource	5	6.8	6.8	68.5
	Informational resource	2	2.7	2.7	71.2
	Relational resource	3	4.1	4.1	75.3
	Product attributes	18	24.7	24.7	100.0
	Total	73	100.0	100.0	

Figure 2 below also shows that out of all the eight resource domains, 'Human resources' and 'Informational resources' were the least important resource domains upon which a majority of the competitive

actions carried out by Turkcell A.S., depends. It also demonstrates that financial resources and product attributes were almost of equal importance to Turkcell A.S. in its competitive interaction processes.

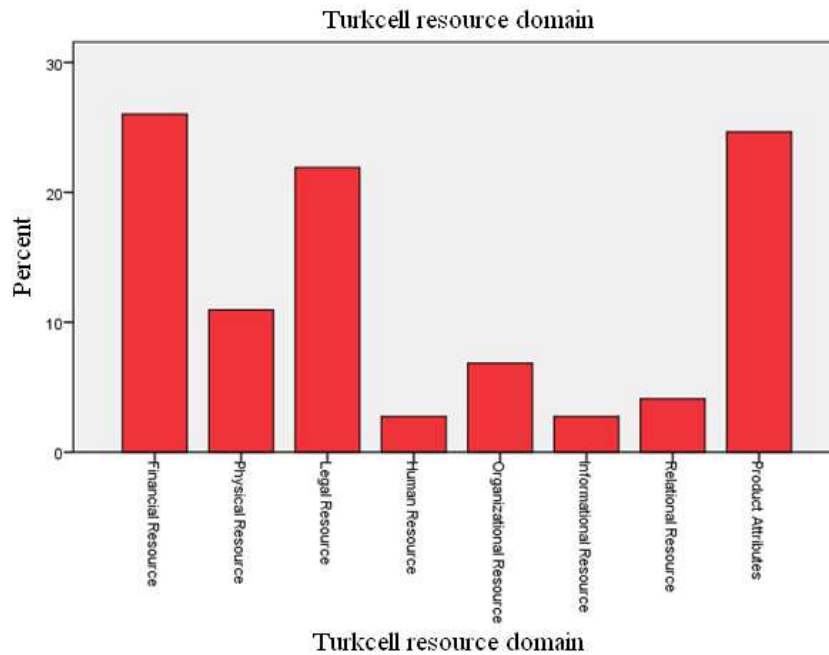


Fig. 2. Distribution of resource domain for Turkcell A.S.

**4.3. Proportion of elementary actions carried out by Vodafone TR.** Interestingly all of the competitive actions recorded for Vodafone TR, were of only two elementary natures: 'Bring about' and 'Destroy'.

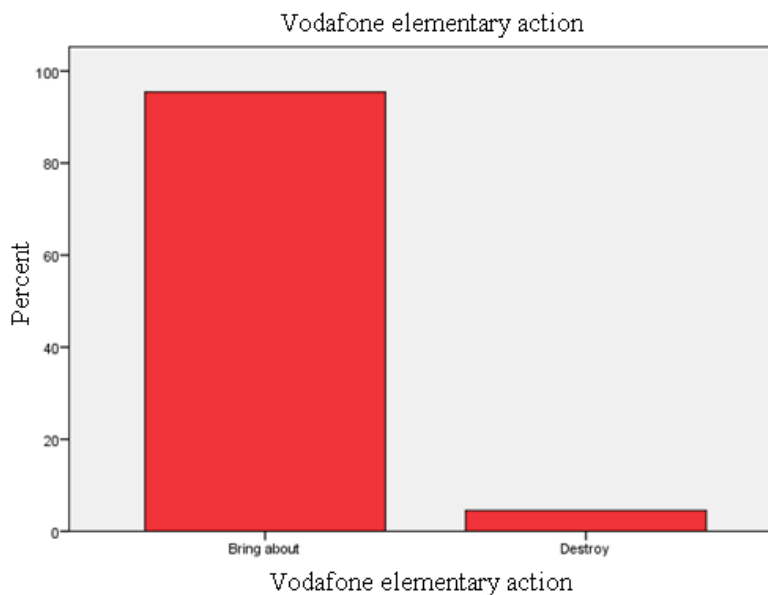
However, only one instance of a 'Destroy' action was recorded while actions of a 'Bring about' nature accounted for over 95% of all of Vodafone TR's competitive actions.

Table 3. Distribution of elementary action for Vodafone TR

		Frequency	Percent	Valid percent	Cumulative percent
Valid	Bring about	21	95.5	95.5	95.5
	Destroy	1	4.5	4.5	100.0
	Total	22	100.0	100.0	

Figure 3 below provides a graphical representation of the findings and shows in explicit terms how in any given competitive interaction process, Vodafone

TR is more likely to initiate and execute an action of a bring about nature than any other type of generic competitive action.



Note: All action types recorded for Vodafone TR were of the bring about and destroy nature, no action type was recorded for the other six elementary action types.

Fig. 3. Distribution of elementary actions for Vodafone TR

**4.4. Resource domains upon which Vodafone TR depends for action initiation.** As peculiar to the industry and in tune with the observation for Turkcell A.S., only six of the eight resource domains were represented in the entire competitive actions carried out by Vodafone TR. Of these actions, ‘Financial resources’ was the

predominant resource upon which the majority (27.3%) of all Vodafone TR’s competitive actions depended. However unlike Turkcell A.S., the second most important resource domain upon which Vodafone TR’s actions depended on was ‘Informational resource’ closely followed by ‘Physical resource’.

Table 4. Distribution of resource domain for Vodafone TR

		Frequency	Percent	Valid percent	Cumulative percent
Valid	Financial resource	6	27.3	27.3	27.3
	Physical resource	2	9.1	9.1	36.4
	Legal resource	1	4.5	4.5	40.9
	Human resource	1	4.5	4.5	45.5
	Organizational resource	2	9.1	9.1	54.5
	Informational resource	3	13.6	13.6	68.2
	Relational resource	4	18.2	18.2	86.4
	Product attributes	3	13.6	13.6	100.0
	Total	22	100.0	100.0	

In the figure below the negligible dependence on Legal and human resources can be seen as both represented less than 5% of the entire competitive actions carried out by Vodafone TR. It is interesting

to note that as observed for Turkcell A.S., human resources are also one of the resources upon which the competitive actions carried out by Vodafone TR, are least dependent on.

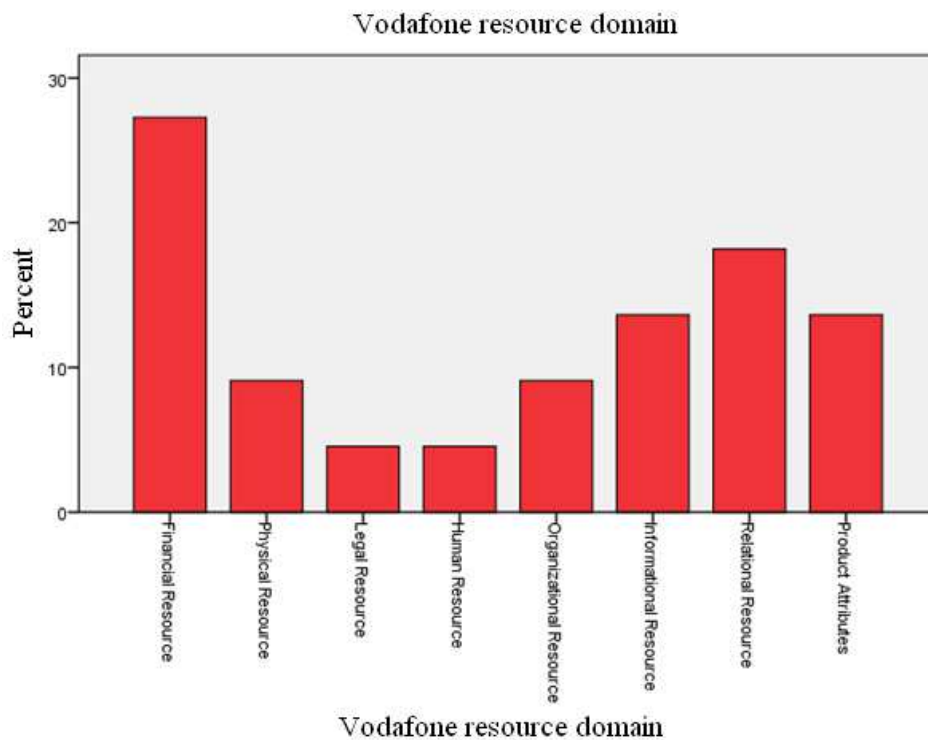


Fig. 4. Distribution of resource domain for Vodafone TR

**4.5. Proportion of elementary actions carried out by Avea A.S.** A majority of the competitive actions carried out by Avea A.S. were of three distinct categories: ‘Bring about’, ‘Forbear to bring about’ and ‘Destroy’ as shown in the table

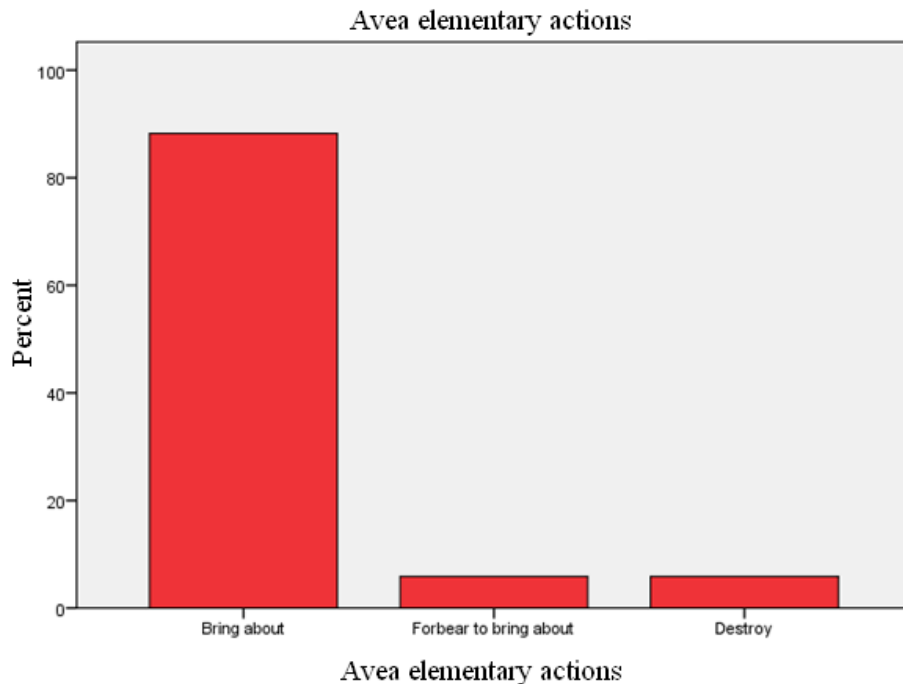
below. Again like Turkcell A.S and Vodafone TR, ‘Bring about’ competitive actions dominated the entire competitive actions it carried out accounting for over 88% of all generic action types observed.

Table 5. Distribution of elementary actions for Avea A.S.

		Frequency	Percent	Valid percent	Cumulative percent
Valid	Bring about	15	88.2	88.2	88.2
	Forbear to bring about	1	5.9	5.9	94.1
	Destroy	1	5.9	5.9	100.0
	Total	17	100.0	100.0	

Figure 5 below presents a graphical representation of the findings, and as mentioned above and clearly visible in the graph, the majority of Avea A.S. competitive actions were

of a bring about nature. Only one instance of the 'Forbear to bring about' and 'Destroy' elementary action types were recorded each as shown in the figure below.



Note: No action types of the nature: suppress, forbear to suppress, preserve, forbear to preserve and forbear to destroy were recorded for Avea A.S.

Fig. 5. Distribution of elementary action for Vodafone TR

**4.6. Resource domains upon which avea A.S. depends for action initiation.** As evident in Table 6 below, financial resource was the most important resource upon which a majority of the competitive actions carried out by Avea A.S. depended on. This

is closely followed by physical resources and product attributes. It is also interesting to note that just like Turkcell A.S. and Vodafone TR, financial resource is a key resource in the competitive arsenal of Avea A.S.

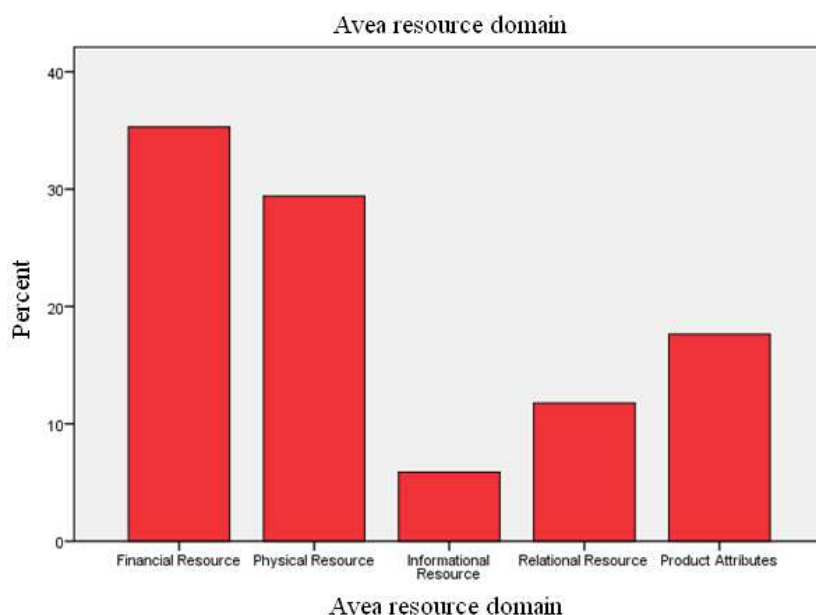
Table 6. Distribution of resource domain for Avea A.S.

		Frequency	Percent	Valid percent	Cumulative percent
Valid	Financial resource	6	35.3	35.3	35.3
	Physical resource	5	29.4	29.4	64.7
	Informational resource	1	5.9	5.9	70.6
	Relational resource	2	11.8	11.8	82.4
	Product attributes	3	17.6	17.6	100.0
	Total	17	100.0	100.0	

Again, Figure 6 below provides a graphical representation of these findings clearly showing among earlier mentioned findings that just as observed for

Turkcell A.S. and Vodafone TR, informational resources is one of the least resources upon which Aveas A.S. competitive actions are dependent upon.





Note: Action types pertaining to: legal resource, human resource and organizational resource, were not recorded for Avea A.S.

**Fig. 6. Distribution of resource domain for Avea A.S.**

## Discussions and conclusion

This research paper set out to understand the distribution of generic competitive actions among the three major industry players in the Turkish mobile telecommunications network operating industry. The study is built on the earlier findings of the first and second research installations in the series of studies initiated to carry out a complete mapping of the competitive dynamics of the Turkish mobile telecommunications industry. It found that Turkcell A.S. arguably the largest player in the industry, carried out the most competitive actions in volume, accounting for 73 of the total 112 competitive actions isolated for the industry. Vodafone TR, the second largest player in the industry, accounted for the second largest competitive actions in volume observed for the industry, carrying out a total of 22 of the 112 competitive actions isolated for the industry. Avea A.S. the most recent entrant into the industry accounted for the least amount of competitive actions by volume, observed for the industry as it contributed a total of 17 of the 112 competitive actions isolated for the industry. In other words, by volume of competitive actions, Turkcell A.S., Vodafone TR and Avea A.S., accounted for over 65%, 19% and 15% of all competitive actions isolated for the industry respectively. This is in line with findings from extant literature which implies that in hypercompetitive industries larger firms are responsible for most of the competitive actions observable within the industry (Schumpeter, 1950; D'Aveni, 1997; Ferrier et al., 1999; Nokelainen, 2010; Turgay & Emeagwali, 2012).

In comparing the distribution of the elementary generic actions observed among the three firms under

study, it was found that for all three companies observed, most of the competitive actions they carried out (about 80% for Turkcell A.S., over 95% for Vodafone TR, and over 88% for Avea A.S.) were of a 'Bring about' nature. Thus it is safe to say that competitive action types most common to the Turkish mobile telecommunications network operating industry are mostly of a 'Bring about' nature. In other words competitive actions taken within this industry are usually aimed at bringing into existence a product, process or capability that was either not in existence before, or are modified to bring into existence an advantage that was not in existence before – all generally aimed at either creating or destroying competitive advantages within this industry. To break this down even further the previous compound sentence also implies that competitive actions within this industry are more of an innovative nature – implying that to succeed within this industry, firms need to be very innovative, as innovativeness is the key ingredient needed for the successful initiation of a competitive action and the successful response to the competitive actions of rival companies within this industry.

Secondly, and also from a holistic perspective, findings show that the majority of the competitive action types observed for this industry relied to a larger extent on the financial resource domain for their initiation and execution. For instance financial resources accounted for 26%, 27.3% and 35% of the resources used to initiate and execute competitive actions by Turkcell A.S., Vodafone TR, and Avea A.S. respectively. Resource domains which all three companies appeared to dwell less on includes informational resources and human resources. For

instance actions dependent on human resources accounted for 2.7% and 4.5% of the total competitive actions carried out by Turkcell A.S. and Vodafone TR respectively, while an examination of the competitive action types observed for Avea A.S. reveals that none of the competitive actions it carried out were dependent on human resources as a key factor.

Thirdly, from an individual firm perspective the findings show that in the competitive interaction process between the three major network operators in Turkey, all three companies are more likely to carry out a bring about competitive action mostly of an innovative type as findings show that the majority of the competitive actions they carried out were of this nature. However, for Turkcell A.S., the second type of generic action it is likely to carry out in the competitive interaction process within this industry is the preservation elementary action type (8.2%) followed by the suppression elementary action type (5.5%). It is also more likely to depend on the following resources in a descending order: Financial (26%), Product attributes (24.7%), Legal (21.9%) and Physical (11%) to carry out most of the generic actions it is more likely to execute. Also for Vodafone TR, beside bring about elementary actions, the firm is more likely to carry out a destroy competitive action (4.5%) next as these two elementary action types were the only ones isolated for the company. It also depended on the following resources in descending order to initiate or execute these two generic actions: Financial (27.3%), Relational (18.2%), Product attribute and Informational resources (13.6% respectively). Finally, the next most likely generic action Avea A.S. is likely to take other than the bring about competitive actions is the 'Forebear to bring about' and 'Destroy' actions both accounting for 5.9% of all of the competitive actions it was observed to have taken within the time period covered by the study. This section thus presents a snapshot of not only the types of generic competitive actions carried out by the firms in question, but also gives the reader an idea about the key resources upon which the actions were based – thus shedding some light into, and granting some understanding of a fundamental component of the source of the competitive advantages of the firms in question.

**Implications of the research findings.** The findings of this study is of immense importance to both literature and practice. These findings contribute to

the competitive dynamics literature, especially to the competitive interaction, and competitive action repertoire streams of the competitive dynamics literature, as well as the competitive intelligence literature, a deeper insight into the competitive interaction process – action and response dynamics within the Turkish mobile telecommunications network operating industry and further enhances knowledge of the action-motivation-capability framework at the core of scientific inquisition (Chen & Miller, 2012) in the field of competitive dynamics. For practice however, the findings provides both industry and non-industry stakeholders with a formidable tool with which to understand the mobile telecommunications network operating industry, especially with regards to the Turkish industry. On the one hand, it provides industry practitioners with more information especially regarding the resource component of the source of their rival's action based competitive advantage. On the other hand, it provides non-industry stakeholders with more useful information on not only the key aspects of the competitive interaction processes peculiar to this industry, but for investing stakeholders, the key resource areas to invest financial assets or the justification for such investments by top level management.

**Recommendations for further research.** The findings of this research are at least an eye opener into how deep action-based competitive dynamics research can go in providing insights and vital information about the complex nature of competitive interaction especially in industries where there is high intensity of competition – in particular hyper-competitive markets. The insights gained could however be made even more credible if further studies are carried out within the same industry but in different geographic and global economic regions ranging from the developing, emerging and developed global economic regions of the world. This insights could be opened up a bit further by carrying out further studies into understanding the reason why certain generic action types are more predominant than others in one geographic location, than in others. Also, further studies could be carried out to understand how dynamic strategies could be developed using multiple scenarios derived from predictions made from the observed patterns of generic competitive actions and responses of rival firms.

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