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Applying a behavioural and operational diagnostic typology of competitive intelligence practice: empirical evidence from the SME sector in Turkey

Sheila Wright^{a*}, Christophe Bisson^b and Alistair P. Duffy^c

^a*Strategic Management & Marketing, Faculty of Business and Law, De Montfort University, Hugh Aston Building, The Gateway, Leicester, LE1 9BH, UK;* ^b*Kadir Has University, Kadir Has Caddesi, 34083, Cibali, Istanbul, Turkey;* ^c*Department of Engineering, De Montfort University, The Gateway, Leicester, LE1 9BH, UK*

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This paper reports on an empirical study conducted within the SME sector in the city of Istanbul, Turkey. The findings from this study enabled the creation of a behavioural and operational typology of competitive intelligence practice, one developed from the work of S. Wright, D.W. Pickton and J. Callow (2002. Competitive intelligence in UK firms: A typology. *Marketing Intelligence & Planning*, 20, 349–360). Using responses to questions which indicated a type of behaviour or operational stance towards the various strands of CI practice under review it has been possible to identify areas where improvements could be made to reach an ideal situation which could garner significant competitive advantage for the SMEs surveyed.

Keywords: competitive intelligence; behaviour; SMEs; typology; Turkey

Introduction

While most EU countries are still trying to recover from the last financial crisis (Chen, 2011), Turkey is today a fast rising economic power with a 7.3% economic growth in 2010 (Central Intelligence Agency, 2011). Small and medium enterprises (SMEs) play an important role, yet Kavcioglu (2009) reported that Turkish SMEs have marketing problems and a lack of information and technology expertise. It is suggested here that one solution would be for Turkish SMEs to become adept at, and fully embrace the practice of competitive intelligence (CI).

CI has received different definitions over the years (Brody, 2008) and has often been assimilated with competitor intelligence, business intelligence or environmental scanning. The study reported in this paper adopts a much less restrictive definition of CI, one provided by Rouach and Santi (2001, p. 553) which is the

art of collecting, processing and storing information to be made available to people at all levels of the firm to help shape its future and protect it against current competitive threat: it should be legal and respect codes of ethics; it involves a transfer of knowledge from the environment to the organization within established rules.

The scope of this study deals with market intelligence, competitor intelligence and technological intelligence (Deschamps & Nayak, 1995) as well as strategic and social

*Corresponding author. Email: sheila.wright@dmu.ac.uk

intelligence (Rouach & Santi, 2001). Thus, this research addresses an important scientific gap by studying the CI practices of SMEs in Turkey.

The importance of SMEs in the Turkish economy

Turkish SMEs play a vital role as they comprise 98–99% of all firms in Turkey (Kavcioglu, 2009). They represent 81% of all employment and contribute 36% of the total GDP of Turkey (Kavcioglu, 2009). SMEs are responsible for 60% of Turkey's overall exports (typical sectors being textiles, clothing, automotive, iron, steel, white goods, chemicals, pharmaceuticals and shipping) and 40% of Turkey's overall imports (typical sectors being machinery, chemicals, semi-finished goods, fuels and transport equipment) (*Hurriyet Daily News*, 2011). Turkey's main trading partners are the European Union (57% exports, 40% imports), Russia and the USA (State Institute of Statistics, 2011). None of these are showing financial buoyancy yet according to Blanke and Mia (2006), Turkey is expected to be in the top 10 economies in 2020. The UK Trade and Investment Report (2009) also states that whilst Turkey has started to face global competition, this has typically come from emerging markets such as China and India.

Competitive intelligence in SMEs and emerging countries

Priporas, Gatsoris and Zacharis (2005, p. 665) noted that 'CI seems to be the key ingredient for success in today's uncertain business environment', regardless of size. Indeed, CI has proved to be an important source of competitive advantage for companies and is a key investment area in the EU (Priporas et al., 2005). Studies in France (Larivet, 2009; Smith, Wright, & Pickton, 2010) note the high level of government intervention and support which provides practical and intellectual assistance to their SME sector. This leads to a heightened awareness of the commercial benefit of such practice and the desire to acquire essential skills to help develop their CI practice. CI practices in SMEs is a growing topic of interest and the sector has been studied in Canada (Brouard, 2006; Tannev & Bailetti, 2008; Tarraf & Molz, 2006), in France (Afolabi, 2007; Bisson, 2003; Knauf, 2007; Salles, 2006; Smith et al., 2010) and in Switzerland (Begin, Deschamps, & Madinier, 2007). Bisson (2010) demonstrated that to compete successfully, SMEs must acquire CI tools and methodologies. A year earlier, Mazarrol, Reboud and Soutar (2009, p. 338) reported that 'owner-managers from small firms need to be alerted to environmental changes, committed to innovation and willing to change or take action if required'. Some five years earlier, Lesca, Caron-Fasan, Janissek-Muniz, and Freitas (2005, p. 1) said that 'in order to become more and more competitive, SMEs and above all SMEs of emergent countries, need to capture international and transnational markets'. Thus, the use of CI methods and tools by SMEs is especially vital in an ambitious nation such as Turkey. There is also compliance with the findings of Bisson (2010, p. 24) who noted that 'in most countries, SMEs constitute the main source of employment and are increasingly active participants in the globalized economy'. Only one study into this area has been carried out in Turkey. Taşkin, Adali, and Ersin (2004) investigated the technological intelligence in Turkish companies, using a sample of 300 firms but no identification of firm size was evident. The evidence above suggests that the use of CI methods and tools by SMEs is critical, not only for all countries, but especially for a nation such as Turkey which relies so heavily on that sector of its commercial constitution, for fiscal, trade and employment success.

Research design

A constructivist/transformational approach was adopted as the aim was to explore the views of a community working in a variety of industry sectors. Elements of pragmatism were present as there was an acceptance that any data collected could only be a reflection of 'provisional knowledge' as opposed to the discovery of indisputable 'facts'. From empirical evidence, the aim was to identify and classify CI behaviour and attitudes of SMEs in Turkey, against an extended typology of practice, based on that first produced by Wright et al. (2002).

A self-completion questionnaire using a mixture of closed and open style questions was used to initiate the data set. The questions were determined according to the model developed from a study of CI active firms in the UK by Wright et al. (2002) and based on four strands: Attitude, Gathering, Use and Location. This model has been a platform or inspiration for further work and/or replication studies by authors such as Adidam, Gajre, and Kejriwal (2009), April and Bessa (2006), Badr (2003), Bouthillier and Jin (2005), Dishman and Calof (2008), Hudson and Smith (2008), Larivet (2009), Liu and Wang (2008), Madden (2004), Oerlemans, Rooks, and Pretorius (2005), Priporas et al. (2005), Santos and Correia (2010), Smith (2005), Suntharamoorthy (2009), Tryfonas and Thomas (2006), Whitehurst (2008), Wright, Eid, and Fleisher (2009a, 2009b) and Wright, Fleisher, and Madden (2008). This provides evidence of validation of the measures developed and as such it was deemed to be one which was entirely appropriate to use as the foundation for this study.

The research reported on here, sought to extend that model by adding two new strands, Technological Support, identified as the degree of investment made to assist with gathering competitive information and IT Support, identified as the type of systems used to manage the flow of competitive information. To ensure compatibility of analysis, the questionnaire used by Wright et al. (2002) was adapted and each of the strands were defined into questions which could then be translated into a typology verdict for that individual firm. Set apart from the main category questions, a self-declared position statement was offered which was used to either confirm or contradict answers given within each category. This served as a clarification mechanism which revealed any inconsistency in a typology verdict based on the allocations of answers to individual questions and the self-declared position statement.

Questions relating to general information such as turnover, sector, employee numbers, main markets and export activity were also asked and placed at the end of the questionnaire which was translated from English to Turkish, back-translated from Turkish to English, tested via a pilot study and subsequently launched in its final on-line format in September 2010. The target group was SMEs located in Istanbul, a city which represents 55% of Turkey's trade, 45% of the country's wholesale trade and generates 21.2% of Turkey's gross national product (Istanbul Metropolitan Municipality, 2009).

The Istanbul Sanayi Odasi (Istanbul Chamber of Industry) provided a membership list which was then cleaned for the purposes of this research. Duplicate data were deleted, as were companies which were deemed to be outside the EU definition (EU Commission Recommendation, 2003) of an SME in terms of turnover (< €50 million) and/or number of employees (< 250). A self-selecting sample of 371 firms indicated a willingness to take part in the survey and the link to the on-line questionnaire was sent to those firms. Only 28 recipients of the invitation, subsequently declined to respond. A total of 22 responses were deleted as their answers to the firm classification questions revealed that they too fell outside the scope of the EU's definition of an SME. A further seven responses were

identified as being from firms which had identified themselves as the local branch of a global company. These firms, although small in number, were considered to be less independent than a typical SME, would not behave in a comparable fashion and would potentially be acting under the direction of a much larger, potentially more resourceful entity. For these reasons, their responses were removed from the data set which resulted in a total of 314 returns being recorded, representing a response rate of 84.6%.

Of the 343 firms which started the survey, 94 dropped out after they had answered the first section on their firm's *gathering* strategies. A further 66 dropped out after they had completed both the *gathering* and *attitude* sections. The questionnaire proved to be sufficiently interesting to the remaining 154 respondents who answered all the following sections on the final four strands: *technological support*, *IT support systems*, *use* and *location*, with the exception of two respondents who failed to complete the final section on location. The percentage response rates for each stage of the survey are shown in Table 1 and it is argued that these are sufficiently high so as to produce meaningful analysis.

Sample profile

Of the 144 firms which declared their industry sector, 59.7% came from the manufacturing sector. The next highest representative was from the IT section with 13.2%. Other sectors were represented, but in less than double digits. These were: construction; food and consumer goods; energy; healthcare; services; retail; textiles; packaging; and veterinary pharmacy. It could be argued that it was very refreshing to see so many manufacturing firms taking an interest in the subject, sufficient so as to complete the survey and offer their contact details in order to receive a copy of the summary report. Manufacturing firms, by their very nature, epitomise the transformational process from input (raw materials) to output (finished goods) and this, more than perhaps any other sector, would appreciate the process which transforms raw data via competitive analysis, into competitive intelligence which delivers insight.

The same number of respondents (144) identified their revenue band with 65 firms (45.13%) reporting <€2 million (micro), 60 firms (41.67%) reporting <€10 million (small) and 19 firms (13.20%) reporting <€50 million (medium). The same number of respondents provided details of their employee numbers with 23 firms (15.97%) having less than 10 employees (micro), 72 firms (50%) having less than 50 employees (small) and 49 firms (34.03%) having less than 250 employees (medium). A majority of 80 firms (55.55%) declared their main markets as both local and global with 49 firms (34.03%) concentrating on their local market and the remaining 15 firms (10.42%) focusing on global markets. Given that this research was aimed at the SME sector, operating in a mix of local and global markets, these returns confirmed that the right contact database had been selected for this task.

Table 1. Response rates for each stage of the survey.

Typology strand	Section heading	Number	%
Gathering	Intelligence Gathering strategies	314	100
Attitude	Attitude toward CI	220	70.06
Technology support	Technology support used for CI	154	49.04
IT systems	IT systems used by manage CI	154	49.04
Use	Use of CI in the decision making process	154	49.04
Location	Location for intelligence gathering in the firm	152	48.40

Applying the results to a behavioural and operational typology of CI practice

As previously cited, building on previous research efforts, pilot study results and subsequent development, a set of descriptors was agreed. These are provided in Appendix 1 and the findings from the survey were applied to this framework. The italic categories are deemed to be those to which a firm could aspire, if it wished to perform competitive intelligence at an optimal level.

Gathering

This was perhaps the easiest section for the respondents to tackle. It asked about the type of information they gathered, the sources they used, how much competitive information they gleaned from their own employees, how they prepared their employees for contact with competitors, what types of financial return they expected from their CI effort and how much financial support was provided for CI activities. Over 2200 responses were recorded to the question on what type of information was collected, with customers, competitors, products in own market, suppliers and laws taking the top five places, closely followed by taxation, economy and finance. Somewhat worryingly, the items which were revealed as being of less interest were ISO standards, politics, scientific articles/publications, industrial processes and patents. Given the sector profile of this sample and the emphasis on manufacturing and IT, this reveals a concerning lack of awareness, or even disinterest, in key elements of their sector which could significantly affect their competitiveness, either positively or negatively.

The most popular source of information was stated to be own knowledge, followed by websites and then trade fairs. This is indicative of reliance on a relatively easily available and not especially well informed set of sources and concurs with the findings that 60% of respondents who said they obtained either a moderate or high amount of competitive information from their own employees. In contrast, the remaining 40% received either none, or only a low amount, which would suggest that they are under-using, or ignoring, a potential reservoir of competitive information. The more sophisticated, and arguably more valuable, sources such as written/verbal evidence from verified sources, forecasting models and management consultants were the least used.

Only 57.8% of respondents stated that they trained and prepared their employees before they went to trade shows, exhibitions, conventions and other public events to make them aware of the type of information they should look for. For the remaining 42.2% which did this only 'occasionally' or 'never', it begs the question as to why not and what are they attending for if obtaining competitive information is not part of their brief? More interestingly, 69.5% of respondents said that they briefed their employees on what they should *not* talk about to competing firms which is a pleasing result, demonstrating a proactive attitude towards protecting the firm's sensitive information. Unfortunately, this leaves 30.5% which pay little attention to this area, a situation which can only be regarded as either naive or reckless.

Whilst 74.4% of respondents stated that they evaluated the reliability of their sources of information, given the dominance of personal knowledge, websites and trade fairs reported above, it is difficult to understand how this is achieved. It is possible that the respondents' understanding of 'checking' is not quite as robust as would be expected.

In terms of financial support given by the organisation to support the task of monitoring the competitive environment, the most common reply was 'minimal to cover the basic task and simple gathering'. A staggering 86.3% of respondents stated that no funds were available as the tasks were done by interested people rather than intelligence

experts, or that funds were available provided that an immediate financial benefit could be produced. Anybody working in CI knows that this is an almost impossible objective to achieve, especially in advance of an investigation, so by default, funds in these firms would be unlikely to be released. In others, funds were considered to be either just about adequate, or not enough, to do a reasonable job.

Taking the findings from these questions and related answers, the overall verdict was very slightly tipped towards a Hunter Gathering level yet the self-declared position for an overall gathering approach was significantly biased, to a factor of nearly 2:1 towards an *Easy Gathering* stance. This suggests that whilst the firms may think they are operating in a sophisticated manner, this represents their desire, rather than reality, a view further supported by the responses which indicated that 64.9% of the firms used *only* public domain sources for their competitive information.

Attitude

When asked how often the firm collected information about competitors, technologies and customers, three vital ingredients which make up the competitive landscape, the most frequently selected choice was the same for all three: 'irregularly, when it becomes available'. This reinforces the conclusion shown above, that firms claiming to have Hunter Gathering traits in the previous section, gave conflicting responses in this section, which suggests that in practice, they do not. Only 14.9% reported that their firm had a written process and a system dedicated to CI with nearly 7.7% saying they did not know, which would suggest that none exists. This leaves a staggering 77.4% which has no formalised process or dedicated system which handles gathered information.

Having said that, 25.5% stated that their firm provided 'full commitment for understanding competitors', and advocated the benefits which that brought, with 23.8% claiming there was 'active support for current activities'. One wonders how on earth that is achieved given their earlier responses. Contrast this further with the self-declared control statement where 47.9% agreed that 'we are too busy thinking about today to worry about tomorrow' and 'CI is a waste of valuable time'. Even those who were in support of CI could only record short-term interest (15.1%) and one-off projects (37%) where CI had been taken seriously. Nobody selected the option which indicated that they had an integrated competitive information process where competitors were monitored, their moves anticipated or reaction plans were formulated. This is strongly indicative of a *Task-Driven Attitude*.

Use

The use of CI by decision makers is, of course, the principal objective of such a programme. The most frequently selected choice, which received nearly twice that of the nearest other option was 'there is no organised process for feeding CI output into the decision-making process'. This was followed some way behind, in almost equal numbers respectively by 'we use CI for short-term decisions' (14.5%) and 'day-to-day operations, as soon as we receive information, we act' (13.6%). The choice of 'long-term decisions' was also reported by 12.9% which suggests a real dichotomy of purpose and use of CI by the sample. By some distance, the highest percentage of responses to this question (37.3%), fell into the *Joneses User* category.

In considering the impact which various elements have on their firm's decision making, 'customer demands' was the most frequent choice, followed by 'technological/technology

standard changes' and 'competitor(s) short-term behaviour'. Given the findings in earlier sections which identified shortcomings in both gathering activities and attitudinal styles, the findings here suggest that a significant change of approach is needed if these firms are to use CI to address those areas which they say have a direct impact on their decision making and as a consequence, their performance. This agrees with the self-declared statement where the largest number of respondents (43.2%) selected 'we use competitive information to help us make decisions about price changes and promotional efforts'. Clearly, looking at websites, relying on public domain information and thinking that CI is a waste of time does not improve their potential to use competitive information in a timely or expert manner. It might even be possible to question whether they do indeed recognise valuable information when it comes their way. The findings from this section, coupled with that of the previous paragraph would suggest not and are indicative of a *Knee-Jerk User*.

Location

It was important to establish if the respondents felt that a dedicated location for the CI effort was beneficial. It was pleasing, if a little surprising that 83.8% of respondents said that their employees 'always' knew who to pass information to, with only 16.2% stating this was rarely the case. The top five departments which took responsibility for collecting CI were first Sales (20.0%) and then Marketing (19.8%). The next two most frequently selected choices were Procurement/Purchasing (10.3%), followed closely by R&D (8.9%). Dissecting the last two in terms of popularity was agreement by 9.4% of respondents who stated that 'all departments take responsibility'. It was possible for multiple choices to be made in answer to this question, garnering a total of 404 individual responses from just 155 firms. This would suggest that despite the data above, few firms have any idea as to who takes overall responsibility and the process operates in a very loose manner.

Contrastingly, a significantly high 33.5% of respondents agreed that a dedicated intelligence unit was 'always' essential to accomplish successfully the monitoring task with 21.9% agreeing that this was 'sometimes' essential but not always. A similar number of respondents (23.2%) thought that a dedicated CI unit was 'a good idea but not always essential' with the remainder indicating that they did not think it was needed at all.

As a consequence, it came as no surprise that 94.2% of respondents stated that they did *not* have a dedicated intelligence unit with 80% of respondents stating that they did not have a person in their firm whose job it was gather, analyse, disseminate and store competitive information. This stands in contradiction of the findings above which indicated that 83.8% of firms said their staff 'always' knew who to pass competitive information to. Of the remaining firms, 31 (20%) said that they did have an employee dedicated to CI with a high figure of 24 indicating that this individual participated in senior management meetings but the remaining seven did not. One can only wonder what they do with the information they receive and what on earth they do with their time. This is not to take any credit away from the 24 firms which could claim to have a reasonably mature and professional approach to CI but it has to be noted that this is an incredibly small number and a disappointing revelation. In total, 89.6% of respondents indicated an *Ad-Hoc Location* approach.

Technology support

This section addressed the type of tools used to assist in the gathering task. From a total of 384 selections across 10 choices the most frequently used tools were websites (36.1%) and

Google (35.7%). Very small numbers were recorded against free search alert tools (0.08%), software allowing statistical analysis and dissemination (0.06%) and specialist websites such as Espacenet for patents (0.06%). This was confirmed in the self-declared position statement section where an astonishing 87% of respondents agreed that they used 'common, freely available tools for web searching such as Google' as their tool of choice. Only eight respondents indicated 'we use full versions of meta-search engines and are familiar with specialist databases for patents and financial information', which further concurs with the Easy Gathering verdict reached earlier. For the technology support section however, the responses indicated an overwhelming 94.9% verdict of a *Simple Technology Support* stance.

IT systems

The level of IT support used by the respondent firms to manage their competitive information was the subject of this section. Of the 173 responses received, 56.1% stated that they did not use any systems at all to manage their competitive information, agreeing with the statement that it was in their minds and they relied on their memory. The next largest category which received agreement was representative of a large gap, as only 12.7% of respondents said they used IT systems to manage competitive information *but* they preferred paper records and did not really like relying on computers, or somebody else for the safety of their information.

The next largest category in answer to whether the firm used any IT systems for CI purposes, was 'I don't know', representing 9.8% of respondents and an unimpressive confirmation of a degree of ignorance regarding their firm's procedures and processes. This agreed with the self-declaration statement with 63.9% of respondents saying they relied on the good will of staff to share what they knew. There can be no question that this was indicative of a *Dismissive IT Systems* stance.

Implications for practice

The findings from this study provide a valuable template to inspire not only SMEs in Turkey, but elsewhere, to achieve competitive advantage. As can be seen from our behavioural and operational typology of competitive intelligence practice in Figure 1, the firms represented in this study have some ground to make up if they wish to reach an optimal state.

It is recognised that not all SMEs have either the desire, or the financial resources to do this, but it is important that this is a considered decision, made with the full knowledge of just how far the firm is from an optimal state. Identifying the firm's position on the typology reveals where improvements need to be made in order to bring them closer to the ideal situation which can only be of benefit to their competitive performance. SMEs especially, need to take full advantage of what competitive information and intelligence can deliver if they are to compete efficiently with large firms which already reap the benefits of CI practice. Firms which ignore this, have no excuse when they are overtaken by more agile rivals who have invested heavily with the aim of achieving an optimal CI effort. In order to remain and increase their performance, there really is no choice but to commit wholeheartedly to CI. 'Do nothing' never was a wise option and it is especially so in today's increasingly complex and dynamic competitive environment.

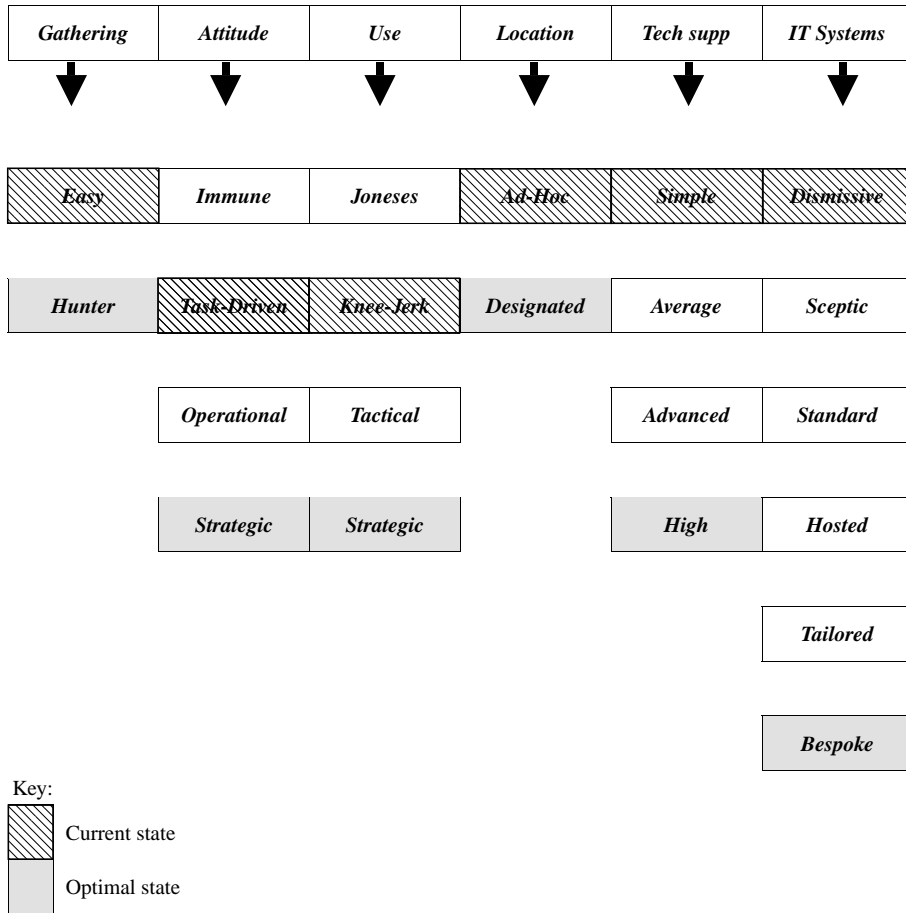


Figure 1. Behavioural and operational diagnostic typology of competitive intelligence practice.

Recommendations for corrective measures

Gathering

Sector verdict: Easy Gathering
 Ideal/optimum state: Hunter Gathering

There are only two categories in this strand and it is not that difficult to operate at an ideal level. Currently, the evidence suggests that there is far too much effort being spent on easy gathering from public sources. This typically produces volume not value. More attention to decision-maker requirements with greater focus on ‘need to know’ rather than ‘like to know’ would produce more intelligent intelligence. The verdict for this category is a key indicator, and potentially a root cause of failings in others. It is symptomatic of an overall failure to engage with CI practice in a professional and diligent manner.

Attitude

Sector verdict: Task-Driven Attitude
 Ideal/optimum state: Strategic Attitude

A proactive attitude which can address all issues facing the firm is essential when trying to develop a CI philosophy within the firm. A task-driven attitude, where questions are asked, and answered, with little value added is very comfortable for those involved and is the natural habitat of the un-inquisitive, the disengaged and those who are too ready to say 'it's not my job to think'. A supportive attitude needs to embrace all strategic issues and be seen as essential for future success, otherwise the CI effort will never mature beyond a 'stick-fetching' activity.

User

Sector verdict: Knee-Jerk User

Ideal/optimum state: Strategic User

It is not surprising that with Easy Gathering and a Task-Driven Attitude that confusion exists about what intelligence should be used for. The predominant use of CI in this sample was for price changes and promotional effort. Whilst CI can indeed help with tactical decisions, this should be the base-level expectation, not the overall ambition. If the sector wants to embrace CI at the strategic level, it has to shift from applying CI output purely to day-to-day decisions and start to use it for predictive purposes such as scenarios and 'what if' analysis.

Location

Sector verdict: Ad-Hoc Location

Ideal/optimum state: Dedicated Location

For a CI programme to be successfully implemented, firms need to define roles, responsibilities and establish a defined location for all CI elements. Only then can duplication of effort be eliminated and the technical and cognitive skills of full-time staff developed. This also ensures that employees are always aware of where to send valuable competitive information when they obtain it.

Technology support

Sector verdict: Simple Technology Support

Ideal/optimum state: High Technology Support

The dominance of web-based, public domain sources accessed by this sample is insufficient to secure any competitive advantage. It is the use to which that information is put, rather than simply identifying it, which is important. Websites are notoriously fickle and can be subject to bias or PR treatment such that they offer little advantage in terms of unique intelligence. The very fact that any information is on a website means it is old news. Everybody who is interested has already seen it, most likely your competitors as well, and as such, the information has very limited value. Firms need to invest in cross-functional integrated systems which can evolve as needs change. Advanced tools such as semantic-based algorithms should be used, which can interrogate and manipulate the competitive information collected.

IT systems support

Sector verdict: Dismissive IT Systems Support

Ideal/optimum state: Bespoke IT Systems Support
Not using any IT system to support CI is highly risky and short-sighted. Five stages of development exist before the optimum bespoke state is reached. Any one of those stages would represent significant improvement on current practice. A standardised or hosted system is entirely achievable by most firms, however small, with a tailored system being the immediate, minimal state with bespoke being set as the firm's ambition.

Implications for SME support networks

Clearly a lot of development and support is needed within the sector if SMEs in Turkey are to reach even a moderately professional approach to competitive intelligence. One or two firms stand out as being somewhat skilled and having the right attitude and support systems but these are very definitely in the minority. It is quite normal for firms to become totally committed to CI once they have observed the benefits and can understand how it applies to their activities.

The French government has readily grasped this and through its Chambers of Commerce & Industry (CCI) network, offers a range of workshops and training courses, delivered by respected University Business Schools. As identified by Smith et al. (2010), SME managers are encouraged to take a CI module and improve their CI analysis skills as part of an overall provision of intelligence awareness. Subject to some not too onerous conditions, some CCIs are able to provide support for setting up a CI unit, typically 50–80% of the total cost, but sometimes this can be 100%. This is the type of skill level and state-funded CI programmes which Turkey's SMEs could find themselves in competition with.

Better awareness of the role which investment in technology can play in enhancing the gathering, analysis and dissemination tasks is essential as this reduces the perceived and actual cost of a CI programme. Technological assistance also enables the operators to spend less time on data handling and more time on interpretation and developing insight which the firm can use to its advantage.

With the current GDP figures and a 'feel-good' factor in Turkey, is there a danger of complacency setting in? Is Turkey witnessing a 'false dawn'? Do they recognise the need to be more competitive and to what degree would their answer influence their future behaviour? Has anybody thought to consider how vulnerable the sector might be to attack, and if so, from where and whom? It is recommended that a well-funded programme of CI awareness and skills training would be the best method to address these issues.

Implications for future research

In considering the next steps for this work, it is intended to conduct a parallel study in the SME sectors of other, similarly placed countries. It would be intriguing to devise a number of success measures for SMEs and then to apply those to firms at different stages in the typology, and by implication, CI maturity. A comparative study in France for example, would be a fascinating indicator of the value and/or effectiveness of the CI programmes funded by their government. If this turned out to be positive, and given the high expectations for revenue and job creation placed on the SME sector in Turkey, there would clearly be an impetus for the Turkish government to consider how it could provide professional CI training and support for this critically important sector of their economy. This could result in an avalanche of interest as firms strive to remain competitive and seek to address the deficiencies which exist in comparison to their neighbours.

It would also be interesting to establish through empirical evidence, whether skilled CI practitioners are able to demonstrate that their work secures and defends the competitive advantage it promises. One could speculate on precisely which type of scenario(s) could be identified quicker, or be analysed more productively, with CI work as opposed to the passive, somewhat pedestrian approach, preferred by the majority of firms which took part in this study.

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Appendix 1. A behavioural and operational typology of competitive intelligence practice.

Gathering

Easy Gathering	Firms which use general publications and/or specific industry periodicals and think these constitute exhaustive information. Unlikely to commit resources to obtain information which may be difficult or costly to obtain. Always looking for an immediate return on investment
<i>Hunter Gathering</i>	<i>Firms knowing that easy gathering information is available to all who care to look. Realise that if CI is to have a strategic impact then additional, sustained effort is required. Resources are available which allow researchers to access sources within reasonable cost parameters, back their instinct, follow apparently irrelevant leads, spend time talking, brainstorming and thinking about CI problems without always being pressured for 'the answer'. Firms which appreciate and support intellectual effort</i>

Attitude

Immune Attitude	Too busy thinking about today to worry about tomorrow. Thinks that the firm is either so small, so big or so special that it enjoys immunity from competitors and thus CI is a waste of time. Minimal or no support from either top management or other departments
Task-Driven Attitude	Finding answers to specific questions and extending what the firm knows about its competitors, usually on an ad-hoc basis. Departments more excited about CI than top management who do not see the benefits
Operational Attitude	A process, with the company at its centre, trying to understand, analyse and interpret markets. Top management usually trying to develop a positive attitude towards CI because they can see it might increase profit, and therefore personal bonuses. Unwilling or unable to think about the application of CI for the long term
<i>Strategic Attitude</i>	<i>An integrated procedure, in which competitors are determined as those who are satisfying our customers' needs, current and/or future. Monitoring their moves, anticipating what they will do next and working out response strategies. Receives both top management support, co-operation from other departments and is recognised by all as essential for future success</i>

Use

Joneses User	Firms trying to obtain answers to disparate questions with no organisational learning taking place. Has commissioned a CI report from a consultant because that is what everybody else has done
Knee-Jerk User	Firms which obtain some CI data, fail to assess its quality or impact, yet act immediately. Can often lead to wasted and inappropriate effort, sometimes with damaging results. Such firms are most vulnerable to planted mis-information by competitors who are more CI aware
Tactical User	CI used mostly to inform tactical measures such as price changes, promotional effort. Some firms can successfully argue that CI loses its impact and timeliness if it gets stuck at the strategic level but are, nevertheless, acutely aware of its potential value to the business

(continued)

Appendix 1. (Continued).

<i>Strategic User</i>	<i>CI is used to identify opportunities/threats in the industry and to aid effective strategic decision making. All levels of staff, management and operational, are aware of Critical Success Factor (CSFs) and their attendant CI requirements. Continuous, legal measures used to track competitors, simulate their strengths and weaknesses, build scenarios and plan effective counter attacks. CI data are applied to 'what-if?' discussions. Contingency planning and counter intelligence is a part of normal strategic thinking. Action plans are implemented and mistakes are seized upon as learning, rather than blaming, opportunities. Open and facilitative management culture which displays trust and encourages involvement</i>
Location	
<i>Ad-Hoc Location</i>	No dedicated CI unit. Intelligence activities, where undertaken are on an ad-hoc basis, subsumed into other departments, with intermittent or non-existent sharing policies
<i>Designated Location</i>	<i>Firms with a specific intelligence unit, full-time staff, dedicated roles, addressing agreed strategic issues. Staff have easy access to decision makers, status is not a barrier to effective communication</i>
Technology support	
<i>Simple Tech Support</i>	The company is just using the free web such as a search engine or looking at some websites which require no specific knowledge. Also use general office software such as spreadsheet
<i>Average Tech Support</i>	Using off-the-shelf products such as meta-search engines which simply reorganise publicly available information for own use. Company might use websites requiring specific knowledge (e.g. Espacenet) and pay to use specialised websites and databases (e.g. patent and finance)
<i>Advanced Tech Support</i>	This information system holds vital and high level information as well as operational and tactical material. Is fully integrated across the business and continually evolves to meet the firm's requirements. Content analysis (e.g. statistical analysis) provided
<i>High Tech Support</i>	<i>In addition to advanced tools, firms use 'clever' algorithms aimed at understanding automatically the competitive information collected. These algorithms are based on semantics</i>
IT systems	
<i>Dismissive IT Systems</i>	Does not use any IT system to manage competitive information
<i>Sceptic IT Systems</i>	Has a system to manage competitive information but prefers to use paper based records. Does not trust IT systems sufficiently and is wary of their reliability
<i>Standardised IT Systems</i>	A standard existing system is purchased from a software vendor and installed on computers located within an organisation
<i>Hosted IT Systems</i>	A standard system is used, but it is not managed by the company itself (e.g. pay per view system)
<i>Tailored IT Systems</i>	In a tailored development, an off-the-shelf system or hosted solution is tailored according to an organisation's needs regarding its competitive information
<i>Bespoke IT Systems</i>	<i>Unique to the firm system which has been designed in-house and aiming at collecting, analysing and disseminating competitive information</i>
