An investigation of the supply chain of fisheries products in Greece

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Abstract. *The present study provides an empirical investigation of the supply chain of fisheries products in Greece, through the implementation of the Structure – Conduct and Performance (SCP) methodological approach. The determinants of market performance have been analyzed considering the causal relationship of industry structure and firm conduct, and consecutively the causal relationship of firm conduct and market performance. Primary data were collected from Greek fisheries products stakeholders through personal interviews. The findings reveal that firm conduct is affected by industry structure and sequentially both have a bearing upon market performance. As concerns the impact of firm conduct on market performance, quality assurance has the most significant positive effect, which reveals the significance of product differentiation strategy in determining the market performance of Greek fisheries firms. According to the total effects on each dependent variable as a whole, the industry structure has greater impact on market performance than the firm conduct. The most important factor that affects firm conduct is international competition while the most important factors that affect market performance are those pertaining to industry structure – namely competitive advantage and C.F.P measures. The most positive and significant effect of competitive advantage that is reflected to customer demand, trade barriers and competition illustrates that it is a prerequisite to improve levels of market performance. These findings may assist all involved parties to confront impediments and develop efficient marketing strategies to compete more successfully in the global marketplace.*

Keywords: market analysis, Structure – Conduct – Performance, fisheries products

1. Introduction

The increase in food production through intensive productive procedures, without considering environmental risks, has shift emphasis to objectives associated with a sustainable development approach. An implication of this is that countries and firms need to integrate economic, biologic, and human procedures to create a sustainable system of commerce [1]. Particularly in the food system, there is an increasing concern by most of the actors involved about health and ethical issues, such as safe food and safe working conditions, as well as environmental protection and conservation of ecosystems biodiversity. The emerging endeavor to provide higher food safety and quality has led to stricter safety specifications and a considerably grown number of quality assurance schemes has been developed, both at international and European level [2]

In the case of agricultural products, quality certification (either it is a certification of traceability or a quality label) contributes to the increase in competitiveness and market share improving the prerequisites for the inclusion in new markets and the terms for higher prices. Especially, in the open sea fisheries sector that constitutes an important part of the food industry, the large and increasing trade of global fisheries production and the fact that much of the trade flow is from developing to industrialized countries, indicate the potential of certification as both an incentive to improved fisheries management and a barrier to trade. For example, many producers of fisheries products have undergone voluntary certification schemes like the ISO 9000 programmes. This occurs not only to raise effectively the quality standards of production procedures, but also to create more possibilities for a firm's products to be chosen by specific importers, retailers or consumers. The latter has become increasingly important due to added emphasis on traceability and food safety, as well as stricter requirements imposed by importers or retailers to their suppliers [3].

Much of previous research on market performance has provided important insights focusing mainly in cross–sectoral aspects, but further insight can be gained by shifting research attention to specific sectors. In view of these considerations, the present empirical effort is focused on investigating the market performance of the Greek fishery sector. The main objective is to analyze the supply chain of fisheries products in Greece, employing the Structure – Conduct and Performance (SCP) framework. The insights obtained from this study can provide all the involved bodies with instruments on how to confront impediments and develop appropriate marketing strategies for an efficient certification promotion. The innovative aspect of this study is the estimation of direct, indirect, and total factors' impact on the dependent variable using a path modeling approach. The majority of performance studies have tended to focus their investigations on either bivariate or multivariate relationships without probing the extent of overall impact. In this study, the direct, indirect, and total impacts of independent variables on each dependent variable are estimated.

The research inquiry begins with the conceptual premises underpinning how a number of important variables (i.e., industry structure and firm conduct) affect market performance. Next, the research design and methodological procedures are described and the study findings are presented. Finally, the main conclusions drawn from the study are discussed and potentially fruitful streams of research are suggested.

2. Conceptual framework

The SCP model represents one of the standard frameworks of market analysis [4]. It has been used in industrial organizations for purposes of competitive analysis and it has been adopted by strategic management holding a prominent position in the area of strategic groups [5]. The model comprises of three key components: the industry structure, the firm conduct and the market performance. The former, which may refer to the number and size of stakeholders, product differentiation, entry and exit barriers, is determined by the market's organizational characteristics that affect the nature of competition and price behaviour within the market. Firm conduct pertains to the market's coordination mechanisms and the price policy applied by the supply chain's stakeholders. Both these market components can affect market performance, which is a measure of the output-price relationship and the degree of innovation and investment, especially in R&D [6].

Specifically, the industry structure refers to economic assets (sales & employment), technology and knowledge, the competitive situation of the firms, and in macro level pertains to distribution of resources, geographical location and industry description [7]. On the other hand, firm conduct determines the firm's competitive behaviour and involves market information, investment, quality improvement systems, stable macroeconomic and legislative framework [8]. Finally, market performance concerns efforts to maximize consumer welfare by producing products at lower cost and an equitable distribution of products among consumers of different needs and also through quality improvements and products diversity, technology and stability in prices and employment [9].

Overall, the SCP approach attempts to explain and predict the market performance of an industry as a consequence of the industry structure and firm conduct assuming that there is a stable and causal relationship between them [8]. Furthermore, it has been argued that not only industry structure may influence firm conduct and market performance, but firm conduct and market performance are likely to feedback and influence industry structure [10]; [11].

According to [12], it is the most popular reduced – form model that does not require price information and it has the potential to capture any type and size of market power; as long as it affects market performance through industry structure. The merit of SCP is precisely that it proposes behaviour as dependant upon the context in which the behaviour occurs. The nature of competition in an industry will depend upon the structure of that industry. It is a tool for organizing the scientific investigation of particular problems and thus it is flexible enough to permit the adoption of new techniques, such as game theory and transaction cost analysis of firm behaviour, just as it adapted in the past with the transition from industry studies to cross-sectional statistical analysis[13]. Models of industry structure, firm conduct and market performance are often central to fisheries management policy but are rarely addressed in the literature [14]. The present empirical

effort examines the SCP hypothesis using a sample of Greek fisheries firms. A graphical presentation of the conceptual model is depicted in figure 1.
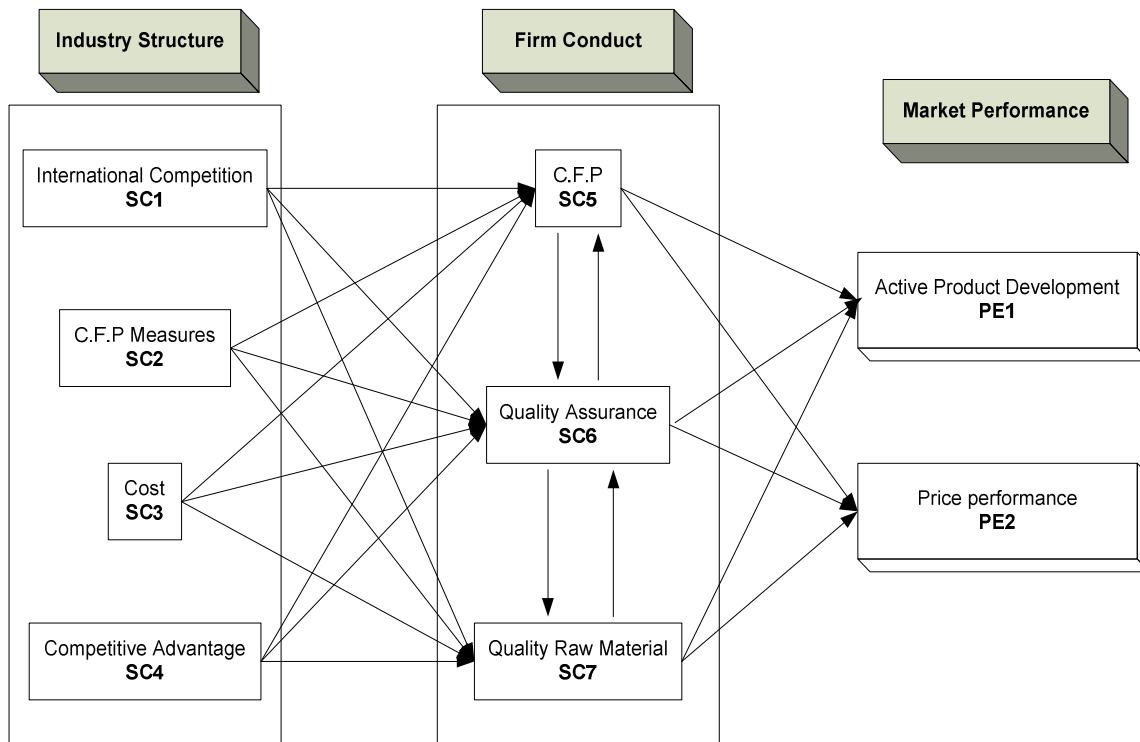
Figure 1: Conceptual Model

3. Data collection

Primary data were collected in a survey (questionnaire) of Greek fisheries firms that were involved in marketing and distribution of fisheries products, through the major fishing port markets in Greece, in terms of quantity distribution. The value of this method is that elicits specific information from the respondents, getting the most accurate and recent market information, and is recommended when secondary data are scarce [15]. Reviewing the relevant SCP literature was essential to effectively operationalize the constructs in Figure 1 and to design all the questions in the survey instrument [6]; [9]; [16]; [17]; [18]; [8]; [1]. Validated scales from previous studies and established terminology were used for all the constructs to obtain reliable and valid measures for the variables included in the questionnaire and to allow for comparisons with existing literature.

Except for demographic questions, such as age and size of firms, questions in the survey instrument used a five-point Likert-scale, ranging from strongly disagree to strongly agree. The value of providing respondents with only five choice positions is that it tends to avoid responses converging on the middle response (i.e. three). On the other hand, too many scale positions (e.g. seven-point scales) tend to confuse respondents [19]. Finally, the research instrument was extensively pretested and refined through personal interviews with stakeholders to establish content validity and clarity.

During the process of data collection, emphasis was placed on identifying the most appropriate individual in each firm to elicit the necessary information. Reliable lists of potential respondents were absent and consequently the snowballing procedure was chosen as a method for data collection. The value of this method is that it identifies cases of interest from people who know people, who are information – rich, good examples for study and good interview subjects [20]. All respondents were in executive positions, serving in firms as managers and/or owners, and reported both familiarity with their firms' activities and involvement in decision making. This ensures reliability of information gathered since the respondents answer the questions within the

field of their responsibility [21]. Finally, a total number of 99 usable questionnaires were gathered. The majority of the firms (31.3%) has over six employees and has been in business for over twenty years (29.3%). Also, the number of fishermen (18.2%) is smaller than the number of wholesalers (25.3%), which is consecutively smaller than the number of retailers (38.4%). Thus, the market could be characterized as oligopoly, since is dominated by a smaller number of sellers (oligopolists) in contrast with the number of buyers. A general profile of the sampling firms is illustrated in Table 1.

Table 1 Profile of fisheries firms

Firm size (employees)	No of firms	% of firms
1	28	28.3
2 – 3	26	26.3
4 – 5	8	8.1
5 – 6	6	6.1
> 6	31	31.3
Total	*99*	*100*
Years in business	**No of firms**	**% of firms**
< 5	10	10.1
6 – 10	23	23.2
11 – 15	21	21.2
16 – 20	16	16.2
> 20	29	29.3
Total	*99*	*100*
Firm status	**No of firms**	**% of firms**
fisherman	18	18.2
broker	4	4
wholesaler	25	25.3
retailer	38	38.4
More than one	14	14.1
Total	*99*	*100*

4. Methodology

All variables included in the questionnaire were gauged through multiple items. Initially, an exploratory factor analysis (EFA) with Varimax rotation was applied to provide a more manageable set of variables relevant to the SCP model. Factor analysis proceeded because the Measure of Sampling Adequacy MSA value was well above the threshold value of 0.50 [22] and 0.60, which is a required value for a good factor analysis [23]. The internal consistency of each factor was then examined by estimating the Cronbach's alpha coefficient. Subsequently, a confirmatory factor analysis (CFA) was conducted to assess and test the measurement model and purify the included factors in the model. The standardized factor loadings and the reliability of the explanatory factors are presented in Table 2. As can be seen, the majority of the scales have alpha values exceeding 0.80, a value that is considered as "very good" for internal consistency reliability [24].

Nine constructs tapping the independent factors in our model were each measured with several indicators. The basic constructs were the following: active product development (PE1), price performance (PE2), international competition (SC1), Common Fisheries Policy measures (C.F.P) (SC2), cost (SC3), competitive advantage (SC4), Common Fisheries Policy (C.F.P) (SC5), quality assurance (SC6) and quality raw material (SC7). The first two constructs (PE1 - PE2) reflect the market performance components, whereas the following four (SC1 - SC4) and the last three (SC5 - SC7) reflect the industry structure and the firm conduct constructs, respectively.

Table 2: Factor Analysis – Confirmatory factor analysis: Standardized loadings (ML estimations), measure reliabilities

Code	Name of construct – items tapping each construct	Factor loading	Eigenvalue	Variance (%)	Goodness-of-fit measures	Standardized path coefficients*
SC1	International competition		2.514	41.89	X^2 : 7.87 df: 9, p: 0.54, CFI: 0.98, RMSEA: 0.000, Reliability a: 0.810	
	Price competition	0.78				0.74
	Promotion competition	0.88				1.00
	Brand competition	0.80				0.73
SC2	C.F.P measures		2.881	72.02	X^2 : 7.87 df: 9, p: 0.54, CFI: 0.98, RMSEA: 0.000, Reliability a: 0.869	
	Reduction fishing fleet	0.88				1.00
	Financing fishing fleet	0.80				0.66
	Support young fishermen	0.84				0.76
	Restricted fishing areas & periods	0.86				0.83
SC3	Cost		1.544	25.72	X^2 : 6.93 df: 6, p: 0.32691, CFI: 0.95, RMSEA: 0.058, Reliability a: 0.603	
	Regulation demand	0.72				0.93
	Disadvantageous procedure	0.86				0.56
SC4	Competitive advantage		2.464	41.06	X^2 : 6.93 df: 6, p: 0.32691, CFI: 0.95, RMSEA: 0.058, Reliability a: 0.836	
	Customer demand	0.82				0.92
	Trade barrier	0.82				0.73
	Competitors	0.87				0.97
SC5	C.F.P		2.212	36.87	X^2 : 15.25 df: 10, p: 0.12, CFI: 0.93, RMSEA: 0.073, Reliability a: 0.811	
	C.F.P awareness	0.89				0.82
	C.F.P measures	0.91				0.90
	C.F.P profitability	0.70				0.61
SC6	Quality assurance		2.720	34.00	X^2 : 37.71 df: 19, p: 0.00645, CFI: 0.98, RMSEA: 0.100, Reliability a: 0.895	
	Environmental protection	0.79				0.90
	Production control	0.89				0.94
	Health & safety	0.87				0.91
SC7	Quality raw material		1.711	34.22	X^2 : 10.77 df: 6, p: 0.09, CFI: 0.93, RMSEA: 0.090, Reliability a: 0.572	
	Selected product suppliers	0.89				0.67
	Knowledge of product origin (quality product)	0.81				0.85
PE1	Active product development		3.176	24.43	X^2 : 96.03 df: 56, p: 0.00070, CFI: 0.96, RMSEA: 0.085, Reliability a: 0.868	
	Standardization	0.80				0.82
	Packaging	0.88				0.86
	Alteration	0.77				0.84

Table 2 Continued					
	Quality label	0.74				0.88
	Vertical integration	0.54				0.72
PE2	Price performance		1.816	13.97	X^2 : 96.03 df: 56, p: 0.00070, CFI: 0.96, RMSEA: 0.085, Reliability a: 0.649	
	Increase C.F.P limitations	0.80				0.90
	Price level	0.83				0.58

Path analysis was performed (using the OLS criterion) to test the operational model depicted in Figure 1. The model consists only of the structural part, where market performance constructs are the dependent variables and SC1 – SC7 are the independent variables.

$$PEi = b_0 + b_nSC_n + e \qquad i = 1,2 \qquad\qquad (1)$$

where b (n = 1,2,….7) are the standardized beta coefficients, and e is the measurement error.

Accordingly, a series of multiple regressions were performed, which were consistent with the specification of the model. Some of the linkages between the variables were found to be statistically nonsignificant. For refining of the model, these linkages were eliminated and a new series of multiple regressions was performed. This resulted in the following equations that represent the direct effects of the independent variables on each dependent variable:

$$PE1 = b_1SC4 + b_2SC6 + e \qquad\qquad (2)$$

$$PE2 = b_3SC5 + b_4SC4 + b_5SC6 + b_6SC7 + e \qquad\qquad (3)$$

$$SC5 = b_7SC1 + b_8SC2 + b_9SC6 + e \qquad\qquad (4)$$

$$SC6 = b_{10}SC7 + b_{11}SC1 + b_{12}SC2 + b_{13}SC5 + e \qquad\qquad (5)$$

$$SC7 = b_{14}SC1 + b_{15}SC6 + e \qquad\qquad (6)$$

The values of the coefficient of determination (R^2) range from 0.283 to 0.546. In general, if R^2 values are 0.20 or bigger, the linearity of a relationship is acceptable [25]. The Pearson correlation coefficients and the results of path analysis are presented in Table 3 and Table 4, respectively.

Direct, indirect, and total (direct + indirect) effects on the dependent variables were subsequently calculated, as some of the independent variables were mediating variables (SC5, SC6 and SC7). Path coefficients were used to decompose correlations in the model into direct and indirect effects, corresponding to direct and indirect paths reflected in the arrows in the model. Indirect effects involve mediator variables that "transmit" a portion of the effect of a prior variable onto a subsequent one [26]. Figure 2 pictorially provides the paths that retained statistical significance and their standardized coefficients.

The direct effects on each dependent variable can be seen in the following equations:

$$PE1 = 0.475SC4 + 0.332SC6$$

$$PE2 = 0.247SC5 + 0.322SC4 + 0.333SC6 - 0.321SC7$$

$$SC5 = 0.290SC1 + 0.347SC2 + 0.223SC3$$

$$SC6 = -0.233SC7 + 0.364SC1 + 0.442SC2 + 0.153SC5$$

$$SC7 = 0.581SC1 - 0.333SC6$$

Table 3 Pearson correlations between the constructs

Constructs	Code	SC1	SC2	SC3	SC4	SC5	SC6	SC7	PE1	PE2
International Competition	**SC1**	1.000								
C.F.P measures	**SC2**	.191	1.000							
Cost	**SC3**	.240	.126	1.000						
Competitive advantage	**SC4**	.518**	.570**	.365*	1.000					
C.F.P	**SC5**	.542**	.217*	.336*	.300*	1.000				
Quality_assurance	**SC6**	.430**	.569**	.211	.460**	.390**	1.000			
Quality raw material	**SC7**	.438**	-.107	-.031	.308*	.240*	-.084	1.000		
Active product development	**PE1**	.612**	.276**	.346*	.627**	.517**	.534**	.374**	1.000	
Price performance	**PE2**	.147	.362**	.233	.451**	.251*	.375**	-.161	.316**	1.000

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

Table 4: Parameter values for path analysis (direct effects)

Construct	Code	Dependent variable: active product development $F= 20.797$, $p< .000$, $R^2 = 0.480$	Dependent variable: price performance $F= 10.562$, $p< .000$, $R^2 = 0.496$	Dependent variable: C.F.P $F= 8.718$, $p< .000$, $R^2 = 0.373$	Dependent variable: quality assurance $F= 22.301$, $p< .000$, $R^2 = 0.487$	Dependent variable: quality raw material $F= 18.913$, $p< .000$, $R^2 = 0.283$
International competition	**SC1**	-	-	0.290 (2.234)**	0.364 (3.784)*	0.581 (6.074)*
C.F.P measures	**SC2**	-	-	0.347 (2.729)*	0.442 (5.670)*	-
Cost	**SC3**	-	-	0.223 (1.812)***	-	-
Competitive advantage	**SC4**	0.475 (3.922)*	0.322 (2.472)**	-	-	-
C.F.P	**SC5**	-	0.247 (1.950)***	-	0.153 (1.721)***	-
Quality assurance	**SC6**	0.332 (2.744)*	0.333 (2.456)**	-	-	-0.333 (-3.483)*
Quality raw material	**SC7**	-	-0.321 (-2.662)**	-	-0.233 (-2.765)*	-
Active product development	**PE1**	-	-	-	-	-
Price performance	**PE2**	-	-	-	-	-

* significant at the 0.01 level, ** significant at the 0.05 level, *** significant at the 0.1 level
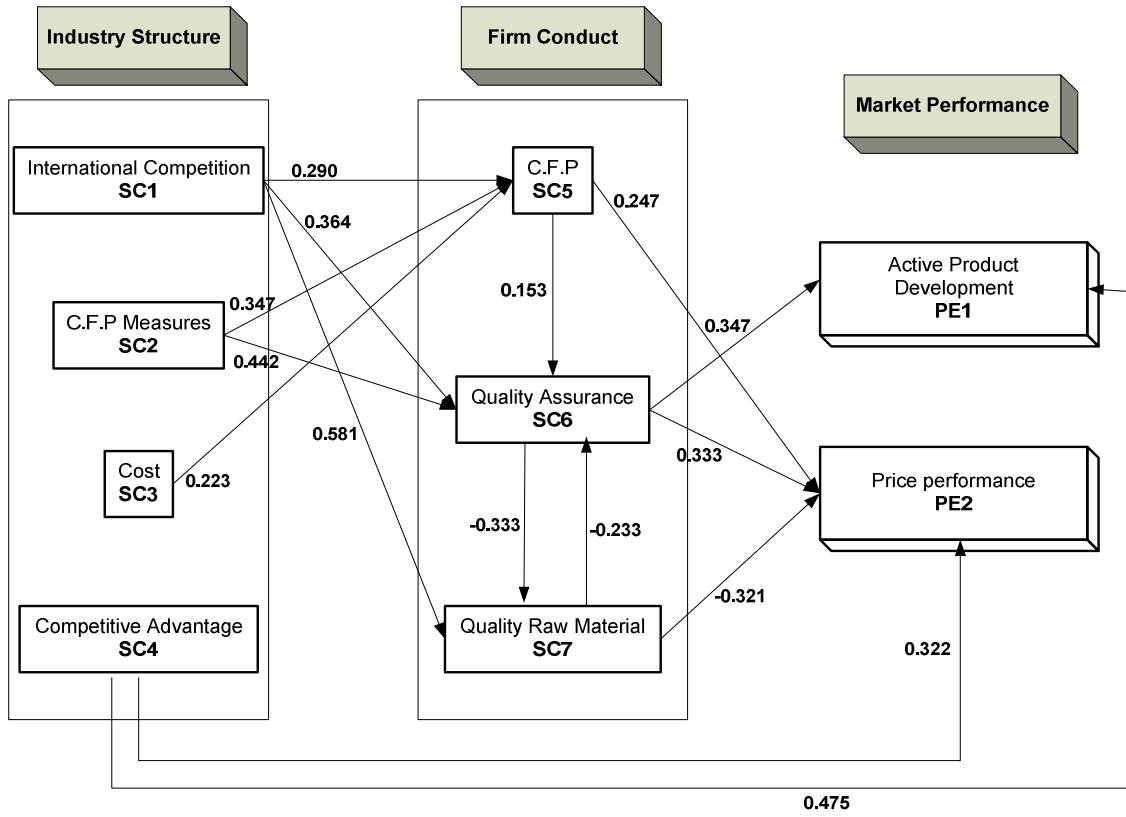
Figure 2: Path diagram – statistically significant paths and standardized coefficients

Accordingly, the indirect effects on each dependent variable are as follows:

$$PE1 = (-0.233*0.332) \, SC7 + (0.364*0.332) \, SC1 + (0.442*0.332) \, SC2 + (0.153*0.332) \, SC5 \Leftrightarrow$$

$$PE1 = -0.077SC7 + 0.120SC1 + 0.146SC2 + 0.050SC5$$

$$PE2 = (-0.321*0.581) \, SC1 + (0.364*0.333) \, SC1 + (0.223*0.247) \, SC3 + (0.442*0.333) \, SC2 + (0.153*0.333)$$

$$SC5 + (-0.233*0.333) \, SC7 + (-0.333*-0.321) \, SC6 \Leftrightarrow$$

$$PE2 = -0.065SC1 + 0.055SC3 + 0.147SC2 + 0.050SC5 - 0.077SC7 + 0.106SC6$$

The total (direct + indirect) effects on each dependent variable are available in the following equations

$$PE1 = -0.077SC7^{*} + 0.475SC4^{*} + 0.332SC6^{*} + 0.120SC1^{*} + 0.146SC2^{*} + 0.050SC5^{***}$$

$$PE2 = -0.398SC7^{**} + 0.439SC6^{**} + 0.322SC4^{**} + 0.297SC5^{***} - 0.065SC1^{**} + 0.055SC3^{***} + 0.147SC2^{*}$$

$$SC5 = 0.290SC1^{**} + 0.347SC2^{*} + 0.223SC3^{***}$$

$$SC6 = -0.233SC7^{*} + 0.364SC1^{*} + 0.442SC2^{*} + 0.153SC5^{***}$$

$$SC7 = 0.581SC1^{***} - 0.333SC6^{***}$$

where *indicates significance at the .01 level, **significance at the .05 level, and *** significance at the .1 level.

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5. Results

5.1 Influences on market performance

Path analysis results showed that all firm conduct constructs affect directly price performance (PE2), whereas only quality assurance (SC6) has a direct impact on active product development (PE1). As regards industry structure components, the analysis shows an interesting mix of relationships since all the industry structure variables affect indirectly market performance through the firm conduct factors, except for competitive advantage (SC4) that has only a direct effect on active product development (PE1) and price performance (PE2). The latter result reaffirms the argument of [25] that there is a positive linkage between competitive advantage and market performance. More specifically, competitive advantage has the strongest impact on active product development (beta: 0.475) followed by quality assurance (SC6; beta: 0.332), CFP measures (SC2; beta: 0.146) and international competition (SC1; beta: 0.120). Additionally, C.F.P (SC5; beta: 0.050) and quality raw material (SC7; beta: -0.077) have a rather modest and only indirect effect on active product development through quality assurance (SC6).

As concerns price performance, quality assurance has the strongest impact (beta: 0.439) followed by quality raw material which has a negative effect though (SC7; beta: -0.398), competitive advantage (SC4; beta: 0.322) and C.F.P (SC5; beta: 0.297). Finally, the impact of cost (SC3) and international competition (SC1) on price performance is modest (beta: 0.055 and beta: - 0.065, respectively) since they affect price performance only indirectly through firm conduct components.

5.2 Influences on firm conduct

The factors that emerge as the most significant determinants of firm conduct constructs were those related to entry barriers-namely international competition and C.F.P measures. Particularly, international competition (SC1) has a direct effect on all the firm conduct components, whereas C.F.P measures (SC2) has an effect on C.F.P (SC5) and quality assurance (SC6), with cost (SC3) affecting only C.F.P. Furthermore, it is worth mentioning the existence of an interesting interrelationship between conduct variables, since quality assurance (SC6) has a negative impact (beta: - 0.233) on quality raw material (SC7) and vice versa (beta: -0.333). C.F.P measures (SC5) have the strongest positive effect on both C.F.P and quality assurance (beta: 0.347 and beta: 0.442 respectively), followed by international competition (SC1) (beta: 0.290 and beta: 0.364 respectively). The next most important antecedent factor for C.F.P is cost (SC3; beta: 0.223), while for quality assurance is quality raw material (SC7), which has a negative effect though (beta = -0.233). Conclusively, quality raw material (SC7) is strongly affected by international competition (beta = 0.581), followed by quality assurance (SC6; beta: -0.333).

5.3 Relative importance of the industry structure for the fisheries sector

The total impact of industry structure factors [international competition (SC1) + C.F.P measures (SC2) + cost (SC3) + competitive advantage (SC4) = 0.741] on active product development is greater than the total impact of firm conduct factors [quality assurance (SC6) + C.F.P (SC5) + quality raw material (SC7) = 0.305]. The same is observed for price performance, since the total impact of industry structure factors [C.F.P measures (SC2) + cost (SC3) + competitive advantage (SC4) + international competition (SC1) = 0.459] is greater than the total impact of firm conduct factors [quality assurance (SC6) + C.F.P (SC5) + quality raw material (SC7) = 0.338].

6. Discussion and implications

This study examined the determinants of market performance on fisheries firms using the SCP framework. Two possible relationships were analyzed: the causal relationship of industry structure and firm conduct, and consecutively the causal relationship of firm conduct and market performance. The findings support the argument of [11]; [17]; [27] that firm conduct is affected by industry structure and sequentially both have a bearing upon market performance. In addition, according to the total effects on each dependent variable as a whole, the industry structure has greater impact on market performance than the firm conduct. The result reaffirms finding from previous literature [25]

The most important factors that affect market performance are those pertaining to industry structure – namely competitive advantage and C.F.P measures, and to firm conduct – namely quality assurance. The most

positive and significant effect of competitive advantage that is reflected to customer demand, trade barriers and competition shows that it is a prerequisite for increased levels of market performance. This implies that fisheries firms aiming to improve their position in the marketplace should become more competitive in order to meet more effectually customer demand and subsequently confront effectively trade impediment. The same result holds for C.F.P measures that constitute entry barriers for fisheries firms and refer to the reduction of the fishing fleet and the restricted fishing areas and periods. This indicates that market performance strongly depends upon oligopoly power. On the other hand, as concerns the impact of firm conduct on market performance, quality assurance has the most significant positive effect, which reveals the significance of product differentiation strategy in determining the market performance of Greek fisheries firms. Quality assurance consists of environmental protection, production control and product's health and safety, which may provide future development opportunities for fisheries firms, indicating that these firms should intensively apply strategies based on product's quality assurance and certification to increase their market performance.

The most important factors that affect firm conduct are those pertaining to industry structure. It is worth mentioning that international competition affects all the firm conduct variables. The result demonstrates the significant impact on the conduct decisions of fisheries firms, and how intense competition in terms of product price, branding and promotion affect all the functions of this particular market. Moreover, C.F.P measures have a rather strong impact on C.F.P and quality assurance, which implies that fisheries firms aiming to increase their product's quality assurance should be consistent with the measures of the Common Fisheries Policy. On the other hand, a finding that was not anticipated was that competitive advantage was not found to be a significant determinant of fisheries firms conduct. This finding may be due to the intense competition in terms of product price, branding and promotion. Furthermore, it is worth commenting the existence of an interesting interrelationship between conduct variables, since quality assurance has a negative impact on quality raw material and vice versa. This result actually adumbrates the pricing system and concerns the price policy under current market conditions (supply & demand) and price differentiation according to product's quality. This negative relationship demonstrates that fisheries firms operating under the current pricing system will face a significant deterioration in the quality assurance of their products.

Overall, fisheries firms aiming to increase their market performance in terms of active product development and price performance should develop their marketing strategies taking into consideration industry structure aspects since they revealed the greater impact upon market performance contrary to firm conduct antecedents. Therefore, a focus on the maintenance of activities and implementation of policies with C.F.P measures seem indispensable for a more competitive market presence. In addition, the identification and subsequently the promotion of competitive advantage in terms of customer demand and trade barriers, along with a better understanding of the challenges and threats of the international marketing competition will offer a more solid background for enhanced performance in a continuously increasing competitive market environment.

The abovementioned consideration offer possible recommendations for the Greek fisheries sector. The international marketing competition plays a significant role for this sector that needs to undertake initiatives to develop its competitive advantage and augment market performance at the firm level to compete more successfully in the global marketplace. In this respect, fisheries firms should meet customer demand and respond directly to trade barriers. Furthermore, quality assurance and consequently quality certification are vital strategies for increasing the market performance of the Greek fisheries firms, which nonetheless could indicate the potential as both an incentive to enhanced fisheries management and a barrier to trade.

Obviously, the study's findings may be generalized with caution outside of the specific context in which it was undertaken. The study was confined to a single – country – single – industry context, estimating a model that consisted of specific cross – sectional measures pertaining to industry structure, firm conduct, and market performance. However, the findings have several important implications for research. From a theoretical point of view, the present empirical effort establishes the viability of SCP framework to understand complex firm behaviour. Moreover, it may provide an opportunity for further research regarding the proposed model of market performance. Possible research avenues may pertain to a more detailed investigation of the industry structure and how different components may influence the implementation of marketing strategies and market

performance. Finally, other constructs, such as cooperation and coordination which can be used to gain more market power, as it has been suggested by [6], might be examined too.

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