

Organizational Performance and Executive Pay in Israel's System of Higher Education

Amir Horkin¹, Baruch Mevorach², Ytzhak Katz³

¹Lecturer at the College of Law and Business in Ramat Gan and Research Director at Maagar Mochot Research Institution Ltd, Israel

²Senior faculty member at the College of Law and Business in Ramat Gan, Adjunct Professor in Tel Aviv University and Scientific Director at Maagar Mochot Research Institution Ltd, Israel

³CEO of Maagar Mochot Research Institution Ltd, Israel

Correspondence: Baruch Mevorach, Senior faculty member at the College of Law and Business in Ramat Gan, Adjunct Professor in Tel Aviv University and Scientific Director at Maagar Mochot Research Institution Ltd, Israel

Received: May 13, 2015 Accepted: May 28, 2015 Online Published: June 11, 2015

doi:10.11114/bms.v1i2.874

URL: <http://dx.doi.org/10.11114/bms.v1i2.874>

Abstract

In the business sector, the relationship between performance and pay is mostly measured with reference to an organization's business results on the one hand and the pay awarded to its senior management on the other hand. The present research shifts the analytical focus to the third sector and to higher-education institutions, assessed in their case—where the notion of profitability loses its relevance—on their performance as perceived by their clients, namely the student body. Our research results point to a positive, strong and significant relationship between performance and executive pay (with a one-year lag) and to a positive, weak and significant relationship between executive pay and performance (again, with a one-year lag). Furthermore, it is the state-funded (hereinafter: budgeted) colleges, where executive pay was by far the lowest, that achieved the highest satisfaction score (averaging 2011 and 2013), despite a slight drop in satisfaction observed in this category from 2011 to 2013. Taken together, however, higher-education institutions saw their satisfaction scores increase in 2013 compared to 2011. The paper leaves aside research performance rankings of higher-education institutions, due to the fact that most institutions in Israel are teaching oriented. As a matter of fact, only few Israeli universities are ranked by international ranking organizations. Furthermore, unfortunately, Israel does not have a formal system of higher education institutions research rankings. In the paper, a large body of literature on performance-related pay in school teaching is not covered.

Keywords: executive pay, students' satisfaction, pay and performance in higher education, pay and performance, the "chicken – egg" dilemma

1. Theoretical Background

In recent years, the Israeli higher-education system has come under severe criticism over executive pay in higher-education institutions. The 2009 State Comptroller Audit uncovered pay excesses, mainly in universities, in abuse of the principle of academic freedom and counter to good governance (State Comptroller, Audit Report on the Higher-Education System, March 2009; Ilani, 2009; Moran-Zelikovich, 2009). At the end of that year, the daily business newspaper *Calcalist* reported that the non-budgeted colleges, legally defined as non-profit organizations exempt from tax, were paying their top executives well more than universities, to the detriment of budgeted institutions and the public, which bears the tax exemption and the high tuition (Pundak 2009). It was further argued that, even though all higher-education institutions in Israel were defined as NFPs (not for profit organizations), the chief strategy followed by the private colleges was to lure academic teaching talent with higher wages than those practiced in the budgeted universities and colleges (loc. cit.). The *Haaretz* daily devoted a line of articles to the subject of executive pay in private colleges, and even presented the "millionaire club", listing those heads of college whose annual pay was one million new Israeli shekels and upwards (Kashti 2014a, 2014b). The colleges argued in response that their pay was not corrupt and was determined by the free market mechanism and based on personal contracts duly approved by the board of directors. They further claimed that the high pay reflected successes in academic initiatives and in obtaining

donations (Kashti, 2014a).

In the business sector, the relationship between performance and pay is mostly measured with reference to an organization's business results on the one hand and the pay awarded to its top management on the other hand (Ward, Amason, Lee & Graffin, 2011). A study on the relationship between pay and performance in public companies in Israel (Barak, Cohen & Lauterbach, 2007) found that executive pay was primarily sensitive to companies' share performance. Another study, conducted by the Research Department of Israel's central bank, the Bank of Israel (Graham, 2010), found that, over the years, pay in Israeli public companies had become increasingly less sensitive to performance, so much so that in the five last years covered by the research it was no longer possible to explain CEOs' pay in terms of business performance. Similarly-oriented studies relating to higher-education institutions, as opposed to business-public companies, focused more on institutional funding rather than executive pay in the various institutions. Thus, for example, researchers Jongbloed and Vossensteyn found that institutional funding was mainly a function of the number of students enrolled (and admitted) into the institution (Jongbloed & Vossensteyn, 2001).

In the present research, we shift the analytical focus to the third sector and to higher-education institutions, assessed in their case—where the notion of profitability loses its relevance—on their performance as perceived by their clients, namely the student body. Our research enjoyed three salient empirical advantages: firstly, our ability to analyze satisfaction scores awarded by students to the various institutions on various parameters, as the party commissioned (Maagar Mochot) to conduct the study for the National Union of Israeli Students; secondly, access to data on top executives in the third sector (both budgeted and non-budgeted institutions) and the public sector (universities), which was only made possible in recent years; finally, we were the first at this stage to be able to preliminarily explore the "the chicken or egg" conundrum with respect to executive pay and the performance of the organizations headed by the executives in question, that is, whether pay was a stronger driver of performance or vice versa.

2. Students, the Clients of Higher-education Institutions

One of the major approaches in organizational literature when it comes to the appraisal of organizational performance is the stakeholder approach. According to Daft (1998), this approach focuses on various stakeholders (groups within and outside the organization) that have some interest in the organization's performance. Stakeholders include owners, workers, clients, suppliers, government and the community. Under this approach, the satisfaction of various stakeholders constitutes an indicator of an organization's performance; and because different stakeholders have different criteria by which they judge the organization's performance, grouping these criteria together might offer a better, multidimensional estimate of the organization's performance and effectiveness (Cameron, 1984; Fomburn & Shanely, 1990).

In this context, Pfeffer & Salancik (1978) emphasize **external stakeholders**. They describe organizational effectiveness as an external measure of the way in which an organization deals with various demands made upon it by external stakeholders. According to them, "The most important aspect of this concept of organizational effectiveness is that the acceptability of the organization and its activities is ultimately judged by those outside the organization" (loc. cit.: 11).

Clients are among the key external stakeholders in the organizational environment, which makes their satisfaction with organizational performance a sound indicator of organizational performance and effectiveness (Friedlander & Pickle, 1968; Pfeffer & Salancik, 1978). The researchers use student satisfaction in American universities to illustrate this point. As they see it, the organizational environment influences the organization, but not every event in the environment does. This is because the web of relationships between the environment and the organization is defined as being a loosely coupled one, characterized by partial and buffered influences. Organizations have information systems for collecting, sifting, classifying and storing information. Based on the organizational information, and through processes of paying attention and interpretation, the picture of the organizational environment forms and develops. Attention to and interpretation of information are influenced by various position-holders. Thus, information featuring prominently in the organizational records will influence the attention accorded by the organization to the environment, its interpretation of the environment, as well as organizational decisions, actions and outputs. According to Pfeffer & Salancik (1978:14), "Information, regardless of its actual validity, comes to take on an importance and meaning just because of its collection and availability". The two further view the fact that universities have significantly stepped up their efforts to collect data on student satisfaction with courses and lecturers as a reflection of students' increased strength vis-à-vis universities and of the increased attention that universities accordingly pay to students. Students, under the stakeholder approach, are thus obviously clients of higher-education institutions; this makes their satisfaction with how these organizations fulfil their function an important indicator of their performance and effectiveness.

3. Top Management

The Top Management Team (TMT) is defined in the literature as the senior members of the management team located at the tip of the organizational pyramid and responsible for laying out the organization's strategy (Jones & Cannella, 2011).

The top management team in the business sector usually consists of different combinations of senior personnel including the CEO, chairman of the board, the firm's president, his VPs, as well as members of the board and senior executives (Mintzberg, 1983; Vancil, 1987; Furtado & Karan, 1990; Mooney & Amason, 2011). Many studies have been conducted with a view to understand how the top management, in its various forms, functions, acts and influences strategic decisions and organizational outputs (Finkelstein, Hambrick & Cannella, 2009). A new approach has even been introduced recently, whereby the top management team are in fact members of the "inner circle" of the CEO or of the dominant coalition (Mintzberg, 1983; Mooney & Amason, 2011).

Top management in American higher-education institutions includes the president, the vice presidents, the rector, the deans, and the CEO and his team. Its strategic roles are, among others, to act in the external environment in financial and legislative matters, to manage relationships with various entities like the legislature and with various groups, such as alumni, students and prospective students (Kast & Rosenzweig, 1986). The president and the CEO are responsible for two main functions: firstly, overall governance of the higher-education institution. This function includes, among others, activity in business, financial, maintenance matters, etc. The second function is mainly the president's responsibility. It includes joint managerial and academic activity together with the faculties and departments involving the development of academic programs, the selection and promotion of lecturers and researchers, etc. (loc. cit.). Strategic decisions made by top management might therefore carry considerable implications for the attractiveness of the higher-education institution among existing and potential clients.

Who is the top management team in higher-education institutions in Israel actually comprised of? In the pre-college-era universities, holders of the senior academic positions, like the president, the rector and the deans were commonly considered the top management team that outlined the organizational strategy. The "college era", which began in the mid-1990s in Israel, saw the intensification of the competition between higher-education institutions over the quantity and quality of students (Ben Shahar, 2000; Gilber, 2000; Levi, 2003). In addition, the Israeli higher-education system did not escape globalization processes (Soen, 2004; Zahor, 2005; Rabinovich, 2009). As a result, CEOs and sometimes even marketing managers got a greater say in strategic decision making processes in higher-education institutions, especially in the private colleges. Consequently, they can be viewed today as an integral part of the top management team.

4. Research Hypothesis, Methodology and Results

Our research is mainly concerned with the so-called "Chicken - Egg" dilemma. Namely, does satisfaction (performance) influence pay much more significantly than pay does influence satisfaction (performance)? We hypothesize the less conventional hypothesis, namely that satisfaction (performance) causally precedes pay in the model linking pay to performance.

In order to examine the relationship in question, we conducted two studies. Study 1 looked at the impact of the organizational performance of higher-education institutions in Israel in 2011—in terms of overall student satisfaction with them and students' willingness to recommend them—on executive pay in those institutions in 2012. Study 2 examined the impact of executive pay in higher-education institutions in Israel in 2012 on their organizational performance in 2013, in terms of overall student satisfaction with the institution. Details on the variables, their sources and their methods of collection are presented hereafter for each of these studies separately.

The sample size in each table below (34, 38, and 42) is comprised of all higher education institutions in Israel appearing in both data sources, e.g., pay and student satisfaction. Overall, there were 66 higher education institutions in Israel as of 2013.

4.1 Study 1: The Impact of Organizational Performance on Executive Pay in Israeli Higher-education Institutions

In this study, we looked at the impact of the organizational performance of higher-education institutions in Israel in 2011—in terms of overall student satisfaction with them and students' willingness to recommend them—on executive pay in those institutions in 2012.

The dependent variable: the pay awarded to the institution's five key executives (hereinafter: the Executive Pay).

The variable is operationalized as the total gross monthly pay awarded to the higher-education institution's five key executives in 2012. The data were taken from two sources: The first was the report by the Head of the Wage and Labor Agreements Department in Israel's Finance Ministry (which appears on the latter's website).¹ The second was the

¹ See website of the Head of the Wage and Labor Agreements in the Finance Ministry: <http://hsgs.mof.gov.il/reportPage.aspx?reportName=PublicEntitiesReports/EntitiesSalariesData&IsDrill=true>

"GuideStar Israel"² website—the go-to place for looking up information on NFPs in Israel. Both websites publish executive-pay figures, the first on executive pay in universities, budgeted (public) and non-budgeted (private) colleges, and the second on executive pay in both budgeted and non-budgeted colleges.

The independent variables: Overall satisfaction with the higher-education institution (hereinafter: Overall Satisfaction): Making up this variable are four different parameters used to measure how satisfied students learning in the higher-education institution were with: its quality of teaching, the choice of courses offered thereby, the teaching staff's treatment of students, and the institution's treatment of students. The satisfaction parameters were measured on an ordinal scale of 1-5, where 5=very high level of satisfaction and 1=very low level of satisfaction. Overall satisfaction with the higher-education institution was measured using a simple mean of these four parameters in 2011. The index is highly reliable (0.79 Cronbach's alpha). Data on student satisfaction with the higher-education institutions in which they study were collected as part of a large-scale survey conducted by the National Union of Israeli Students in 2011 via the Maagar Mochot Research Institute, based on the replies provided by about 5,600 respondents.³ The data were taken from the website of the National Union of Israeli Students.⁴

Willingness to recommend the higher-education institution: This variable is operationalized using a single parameter which examined students' readiness to recommend the higher-education institution they attended to friends. The question was phrased as follows: "Would you recommend the higher-education institution you are currently studying in to your friends?" The variable was measured on an ordinal scale of 1-5 where 5=I would certainly recommend it, and 1=I would certainly not recommend it. Each institution of higher-education had its mean score calculated on this scale. The data for this variable were likewise collected as part of the large-scale survey commissioned by the National Union of Israeli Students in 2011.

Dummy variables for the type of higher-education institution: Higher-education institutions in Israel are generally divided into three types: universities, public colleges funded (budgeted) by the Council for Higher Education (CHE)/the Planning and Budgeting Committee (PBC) and private colleges that are not funded (budgeted) by the CHE/PBC.⁵ According to the CHE's website, there are currently nine universities, 20 budgeted colleges and 16 non-budgeted colleges.⁶ A dummy dichotomous variable was constructed for each of these three types of institutions, taking the values of 1 or 0. Thus, for example, the values for dummy variable "Universities" are 1=university or 0=higher-education institution other than a university. Similarly, the dummy variable "Budgeted Public Colleges" was assigned the values of 1=budgeted public college, or 0=higher-education institution other than a public college, while dummy variable "Non-budgeted Private Colleges" was assigned the values of 1=non-budgeted private college, or 0=higher-education institution other than a private college. All in all, three dummy variables were constructed for the three types of higher-education institutions.

² The GuideStar website offers official information from the Fellowship Societies Registrar database of all NFPs in Israel. It forms the most comprehensive and qualitative source of information on civil society organizations in Israel and affords all NFPs operating in Israel a web presence. This database was set up to ensure transparency in the conduct of NFPs in Israel. Anyone with an interest in NFPs, including donors, volunteers, suppliers and clients, can find official information submitted to the Fellowship Societies Registrar on the management practices of any active NFP in Israel. GuideStar itself is a non-profit project, developed by philanthropic players and the Israeli government, and as such it operates from within and for the third sector, based on the belief that public transparency is an important means for this sector's development. The website attaches much importance to presenting the information as is, without any judgment. None of the organizations appearing on GuideStar pay for being included therein, and each of the records are freely available for anyone to consult. The GuideStar website also serves as an important means for foundations and donors to collect information on NFPs and make decisions regarding donations and grants, and it is designed the help NFPs raise funds and other resources.

³ The survey was conducted as an internet survey using a structured questionnaire during October 2011, among a large-scale sample of 5,608 respondents constituting a sample of the student population learning in higher-education institutions and registered as members of the Union of Students in their higher-education institution, which is, in turn, a member of the National Union of Israeli Students. The sampling error for the various estimates is estimated at 4.0% at the 95% confidence level.

⁴ Source: the National Union of Israeli Students website, <http://www.nuis.co.il/wp-content/uploads/2012/01/2011.pdf>.

⁵ See CHE website, http://che.org.il/?page_id=641.

⁶ In addition to those, there are academic colleges for training teaching staff (21 in all) and higher-education institutions operating in Judea and Samaria with the CHE's recognition.

Study 1 Findings: The impact of Organizational performance in 2011 on executive pay in higher-education institutions in Israel in 2012

Table 1. Correlations between Overall Satisfaction and the other independent variables

	Overall Satisfaction in 2011	
	Spearman's r	Pearson's r
Willingness to recommend the institution in 2011	***0.75	***0.78
Dummy variable: Universities	-0.32	0.21
Dummy variable: Budgeted Colleges	0.30	0.19
Dummy variable: Non-budgeted Colleges	-0.01	-0.06

*P<0.05 **P<0.01 ***P<0.001 N=34.

Table 1 above presents the correlations among the independent variables. It depicts a high, positive and statistically significant correlation between overall satisfaction with one's higher-education institution and the willingness to recommend it (Pearson's $r=0.78$, Spearman's $r=0.75$, $n=34$, $p=0.0001$). On the other hand, no relationship was found between Overall Satisfaction and the three dummy variables representing the type of institution, nor between the latter and the willingness to recommend one's higher-education institution.

Table 2. Correlations between Executive Pay in 2012 and the independent variables

	Executive Pay in 2012	
	Spearman's r	Pearson's r
Overall Satisfaction in 2011	-0.05	-0.04
Willingness to recommend the institution in 2011	-0.26	-0.22
Dummy variable: Universities	**0.45	*0.31
Dummy variable: Budgeted Colleges	** -0.47	** -0.50
Dummy variable: Non-budgeted Colleges	**0.44	**0.53

*P<0.05 ** P<0.01 ***P<0.001 N=34.

Table 2 above presents the correlations between Executive Pay in 2012 and the independent variables. A strong, positive and statistically significant relationship was found between dummy variables Universities and Non-budgeted Colleges on the one hand and Executive Pay in 2012 on the other hand. However, the relationship between dummy variables Budgeted Colleges and Executive Pay in 2012 was found to be strong, negative and statistically significant. Conversely, no significant relationship was found between Overall Satisfaction in 2011—or between the willingness to recommend the higher-education institution in 2011—and Executive Pay in 2012. The table further indicates that Executive Pay in Budgeted Colleges was significantly lower than Executive Pay in Universities and Non-budgeted Colleges.

Table 3. Correlations between Executive Pay and Overall Satisfaction, by type of higher-education institution

Executive Pay in 2012	Overall Satisfaction in 2011	
	Spearman's r	Pearson's r
Overall sample (n=18)	-0.05	-0.04
In universities (n=8)	* -0.74	* -0.69
In Budgeted Colleges (n=18)	0.26	0.35
In Non-budgeted Colleges (n=5)	0.30	0.22

* P<0.05 ** P<0.01 *** P<0.001

Table 3 above presents the correlations between Overall Satisfaction in 2011 and Executive Pay in 2012, both across the entire sample and for each of the three types of higher-education institutions (Universities, Budgeted Colleges and Non-budgeted Colleges) separately. In general, there was no significant relationship found between Overall Satisfaction in 2011 and the Executive Pay in 2012 across the overall sample (Pearson's $r=-0.04$, Spearman's $r=-0.05$, $n=34$, $p=0.815$). A positive, insignificant relationship was found between these two variables among the budgeted and non-budgeted colleges. Among universities, on the other hand, a strong, negative and significant relationship was found between Overall Satisfaction in 2011 and Executive Pay in 2012 (Pearson's $r=-0.69$, Spearman's $r=-0.74$, $n=8$, $p=0.03$). What this means is that when it comes to universities, the higher the Overall Satisfaction was, the lower the Executive Pay in it was in the following year.⁷

In addition, we examined the correlation between Overall Satisfaction in 2011 and Executive Pay in 2012 among the outlying observations, where the variance is supposed to be highest (March & Sutton, 1997). To do so, we examined this correlation within those institutions ranked top three and last three in terms of Overall Satisfaction in 2011. The

⁷ It should be noted in this context that, on the one hand the sample of universities here is too small to allow reaching far-reaching conclusions on the subject, but on the other hand this sample constitutes the entire population of universities in Israel and one might therefore argue that the significance test is meaningless in this case.

examination yields a positive yet insignificant correlation (Pearson's $r=0.40$, Spearman's $r=0.26$, $n=6$, $p>0.05$).

Table 4. Findings from multiple regression for predicting Executive Pay in 2012

The independent variables [#]	Executive Pay in 2012	
	beta	Sig
Overall Satisfaction in 2011	0.600	0.0001
Dummy variable: Universities	0.284	0.0001
Dummy variable: Budgeted Colleges	0.131	0.143
Dummy variable: Non-budgeted Colleges	0.305	0.0001
$R^2=0.966$, $ADJ-R^2=0.961$, $n=34$, $p=0.0001$		

#In the current model, we preferred using Overall Satisfaction in 2011 rather than the variable representing willingness to recommend the institution for a number of reasons: (a) There is a high, strong level of Multicollinearity between the two variables ($r=0.8$); the solution was thus to exclude one of the two variables out of the model; (b) as an index based on four parameters, we preferred Overall Satisfaction in 2011 as a more reliable variable than willingness to recommend the institution, which is based on only one parameter; (c) use of the Overall Satisfaction variable affords us a valid comparison between the two studies presented here.

Table 4 above presents findings from multiple regression analysis⁸ for predicting Executive Pay in 2012. The findings suggest that the regression model is statistically significant, explaining 96% of the variance in Executive Pay in 2012 ($R^2=0.96$, $p=0.0001$). Overall Satisfaction in 2011 positively and significantly influences Executive Pay in 2012 (Beta=0.6, $p=0.0001$). Dummy variables Universities and Non-budgeted Colleges were found to have a significant positive impact (albeit relatively weak) on Executive Pay in 2012, which means that there are significant differences in Executive Pay between the three types of higher-education institutions.

Table 5. Variance analysis of Overall Satisfaction in 2011 and Executive Pay in 2012, by type of higher-education institution

	Overall Satisfaction in 2011 [#]	Overall monthly pay awarded to the institution's five key executives in 2012 (NIS) ^{##}
Overall sample (n=31)	3.43	254,367
In universities (n=8)	3.34	295,863
In Budgeted Colleges (n=18)	3.48	196,898
In Non-budgeted Colleges (n=5)	3.39	326,211

[#] $F=0.945$, $P=0.401$ ^{##} $F=15.8$, $p=0.0001$.

Table 5 above presents variance analysis of Overall Satisfaction in 2011 and of Executive Pay in 2012 by type of higher-education institution. The table points to significant differences in Executive Pay in 2012 ($F=15.8$, $P=0.0001$), with the highest monthly pay found in non-budgeted colleges (NIS 326,211), the lowest pay in budgeted colleges (NIS 196,863), and universities lying in the middle with NIS 295,863 gross paid to the institution's five key executives per month. On the other hand, no differences were found between Universities, Budgeted Colleges and Non-budgeted Colleges in terms of Overall Satisfaction in 2011 ($F=0.945$, $P=0.40$).

4.2 Study 2: The Impact of Executive Pay in 2012 on Organizational Performance in 2013 in Higher-education Institutions in Israel

In this study, we examined how Executive Pay in Israel's higher-education institutions in 2012 influenced their organizational performance in 2013 in terms of overall student satisfaction with them.

The dependent variable: Overall Satisfaction.

The variable is made up of 12 different parameters measuring how satisfied students attending the higher-education institution were with: the overall quality of teaching in the institution; the level of the courses; the quality of the lecturers as teachers; the quality of the teaching assistants as teachers; the lecturers' attitudes towards the students; the way scores are determined; the degree curriculum; physical conditions in the classrooms; secretarial services; concern for student well-being; computer services; and cafeterias. The satisfaction parameters were measured on an ordinal scale of 1-5, where 5=very high level of satisfaction, and 1=very low level of satisfaction. Overall Satisfaction was measured

⁸ The multiple-regression model (which includes the regression constant) has, by definition, full multicollinearity between the regression constant and the three dummy variables. The alternatives for addressing this problem are either to use a regression model through the origin (without the regression constant) (Montgomery & Peck, 1982; Eisenhauer, 2003) or to exclude one of the dummy variables from the model. In this case, the theoretical consideration led us to choose the first alternative, and we therefore used a regression model through the origin. See also another explanation in the Appendix.

using a simple mean of the 12 parameters above in 2013. The measure has a high level of reliability (0.90 Cronbach's alpha). The data on students' satisfaction with the higher-education institutions they attended were collected as part of a large-scale survey conducted by the National Union of Israeli Students in 2013 via the Maagar Mochot Research Institute, based on the input of some 9,300 respondents.⁹ The data were taken from the website of the National Union of Israeli Students.¹⁰

The independent variables:

Executive Pay: This variable is operationalized as the overall gross monthly pay (in NIS) awarded to the five key executives of the higher-education institution in 2012 as described in Study 1 above.

Dummy variables for the type of higher-education institution: three dichotomous (0,1) dummy variables for "Universities", "Budgeted Colleges" and "Non-budgeted Colleges", as described in Study 1 above.

Study 2 Findings: The impact of executive pay in 2012 on organizational performance in 2013 in institutions of higher education in Israel

Table 1. Correlations between Executive Pay in 2012 and the other independent variables¹¹

The independent variables	Executive Pay in 2012	
	Spearman's r	Pearson's r
Dummy variable: Universities	**0.45	*0.31
Dummy variable: Budgeted Colleges	** -0.47	** -0.50
Dummy variable: Non-budgeted Colleges	**0.44	**0.53

*P<0.05 ** P<0.01 *** P<0.001 N=42.

Table 1, which presents the correlations among the independent variables, depicts positive correlations with statistical significance of medium strength between Executive Pay in 2012 and the dummy variables Universities (Pearson's $r=0.31$, Spearman's $r=0.45$, $n=42$, $p<0.05$) and Non-budgeted Colleges (Pearson's $r=0.53$, Spearman's $r=0.44$, $n=42$, $p<0.01$). On the other hand, a negative relationship with significance of medium strength was found between Executive Pay in 2012 and the Budgeted Colleges dummy variable (Pearson's $r=-0.50$, Spearman's $r=-0.47$ $n=42$, $p<0.01$).

Table 2. Correlations between Overall Satisfaction in 2013 and the independent variables

The independent variables	Overall Satisfaction in 2013	
	Spearman's r	Pearson's r
Executive Pay in 2012	**0.41	**0.46
Dummy variable: Universities	-0.03	0.02
Dummy variable: Budgeted Colleges	0.13	0.04
Dummy variable: Non-budgeted Colleges	0.13	0.17

*P<0.05 **P<0.01 ***P<0.001, N=42.

Table 2 above presents the correlations between Overall Satisfaction in 2013 and the independent variables. A strong, positive and statistically significant relationship was found between Executive Pay in 2012 and Overall Satisfaction in 2013 (Pearson's $r=0.46$, Spearman's $r=0.41$, $n=42$, $p<0.01$). On the other hand, no relationship was found between the three dummy variables—Universities, Non-budgeted Colleges and Budgeted Colleges—and Overall Satisfaction in 2013.

Table 3. Correlations between Overall Satisfaction in 2013 and Executive Pay in 2012, by type of higher-education institution

Executive Pay in 2012	Overall Satisfaction in 2013	
	Spearman's r	Pearson's r
Overall sample (n=38)	**0.43	*0.39
In universities (n=9)#	0.12	0.29
In Budgeted Colleges (n=19)	0.27	0.38
In Non-budgeted Colleges (n=10)	0.51	0.51

⁹ The survey was conducted as an internet survey using a structured questionnaire during August-September 2013, among a large-scale sample of 9,268 respondents constituting a sample of the student population learning in higher-education institutions and registered as members of the Union of Students in their higher-education institution, which is, in turn, a member of the National Union of Israel Students. The sampling error for the various estimates is estimated at 2.0% at the 95% confidence level.

¹⁰ Source: the National Union of Israeli Students website, <http://www.nuis.co.il/wp-content/uploads/2014/01/2013.pdf>.

¹¹ The findings in this table are in fact the same as those in Study 1/Table 2 above, since the classification of the higher-education institutions into the three categories of higher-education institutions remains constant.

* $P < 0.05$ ** $P < 0.01$ *** $P < 0.001$

#Ariel University in Samaria did not provide any satisfaction data during the 2011 survey, but did provide them for the 2013 survey. This is why the number of universities was eight in Study 1 and nine in Study 2 (including Ariel University).

Table 3 above presents the correlations between Overall Satisfaction in 2013 and Executive Pay in 2012 both across the overall sample and for each of the three types of higher-education institutions (Universities, Budgeted Colleges and Non-budgeted Colleges) separately. Overall, a positive significant relationship was found between Overall Satisfaction in 2013 and Executive Pay in 2012 across the whole sample (Pearson's $r=0.39$, Spearman's $r=0.43$, $n=38$, $p < 0.01$). The relationship between these two variables remained positive, yet insignificant, among Universities, Budgeted Colleges and Non-budgeted Colleges. However, since each of the three categories in question practically encompasses the entire population of higher-education institutions in that category, we addressed the meaning of the findings without regard to significance level. It was thus found that the highest correlation between Executive Pay in 2012 and Overall Satisfaction in 2013 existed among Non-budgeted Colleges (Pearson's $r=0.51$, Spearman's $r=0.51$, $n=10$). The lowest correlation was among Universities (Pearson's $r=0.29$, Spearman's $r=0.12$, $n=9$) and the middle among Budgeted Colleges (Pearson's $r=0.38$, Spearman's $r=0.27$, $n=19$). What this means is that Executive Pay in 2012 positively influences Overall Satisfaction in 2013—in descending order of the correlation's positive strength—in the Non-budgeted Colleges, the Budgeted Colleges and the Universities.

Table 4. Findings from multiple regression for predicting Overall Satisfaction in 2013

The independent variables	Overall Satisfaction in 2013	
	beta	Sig
Executive Pay in 2012	0.14	0.005
Dummy variable: universities	0.40	0.0001
Dummy variable: Budgeted Colleges	0.63	0.0001
Dummy variable: Non-budgeted Colleges	0.43	0.0001
$R^2=0.99$, $ADJ-R^2=0.99$, $n=38$, $p=0.0001$		

Table 4 above presents findings from multiple regression analysis¹² for predicting Overall Satisfaction in 2013. The findings indicate that the regression model is statistically significant, explaining 99% of the variance in Overall Satisfaction in 2013 ($R^2=0.99$, $p=0.0001$). Executive Pay in 2012 positively and significantly influences Overall Satisfaction in 2013 (Beta=0.14, $p=0.005$). All dummy variables (Universities, Non-budgeted Colleges and Budgeted Colleges) were found to have a significant positive impact on Overall Satisfaction in 2013, which means that there are significant differences in Executive Pay in 2012 among the three types of higher-education institutions (see Table 5 below).

Table 5. Variance analysis of Overall Satisfaction in 2013 and Executive Pay in 2012, by type of higher-education institution

	Overall Satisfaction in 2013 ^{##}	Pay awarded to the five key executives in the higher-education institution in 2012 (in NIS) [#]
Overall sample ($n=38$)	3.59	254,367
In universities ($n=9$)	3.57	295,863
In Budgeted Colleges ($n=19$)	3.57	196,898
In Non-budgeted Colleges ($n=10$)	3.65	326,211

[#] $F=15.8$, $P=0.0001$ ^{##} $F=0.281$, $P=0.757$

Table 5 above presents variance analysis of Overall Satisfaction in 2013 and of Executive Pay in 2012 by type of higher-education institution. The table depicts significant differences in Executive Pay in 2012 ($F=15.8$, $P=0.0001$) as found in Study 1 above. On the other hand, findings indicate insignificant differences in Overall Satisfaction in 2013 between Universities, Budgeted Colleges and Non-budgeted Colleges ($F=0.281$, $P=0.75$).

5. Conclusion and Discussion

In the two studies, we examined, for the first time, the impact of organizational performance on executive pay in the following year, and then the impact of executive pay on organizational performance in the subsequent year in higher-education institutions in Israel, defined as non-profit organizations.

¹² In this case too, there is full multicollinearity between the regression constant and the three dummy variables in the multiple regression model (which includes the regression constant). In this case too, we chose to solve the problem using the regression model through the origin, amongst others in order to allow comparability with the Study 1 model and findings.

The findings show that organizational performance has a strong, positive and significant impact on executive pay in organizations in the succeeding year. It has also been found that executive pay in organizations has a weak, positive and significant influence on subsequent organizational performance. This was particularly obvious in the case of non-budgeted colleges, less so in budgeted colleges and universities. It turns out, then, that the theoretical model positively linking executive pay to organizational performance in the context of business organizations also finds empirical support in the context of non-business, non-profit organizations.

Table 6. Overall Satisfaction in 2011 and 2013: trends and means, by type of higher-education institution

	Difference between 2013 and 2011 [#]	Overall Satisfaction in 2011	Overall Satisfaction in 2013	Mean satisfaction with the institution ^{##}
Overall sample (n=38)	+0.16	3.43	3.59	3.510
In universities (n=9)	+0.23	3.34	3.57	3.454
In Budgeted Colleges (n=19)	+0.09	3.48	3.57	3.525
In Non-budgeted Colleges (n=10)	+0.26	3.39	3.65	3.520

[#] Difference in the overall satisfaction between 2013 and 2011.

^{##} Simple mean of the overall satisfaction in 2013 and 2011.

It should be noted that scores for Overall Satisfaction with the higher-education institution in all three categories of higher-education institutions went up between 2011 and 2013 (see Table 6 above). In the budgeted colleges, where executive pay is actually significantly the lowest, Overall Satisfaction in 2011 and the mean Overall Satisfaction score are highest compared to universities and non-budgeted colleges, despite the positive increase between 2011 and 2013 in Budgeted Colleges being the lowest (+0.09) compared to parallel increases in universities and non-budgeted colleges. Could it be, then, that senior executives in the budgeted colleges have internalized the fact of their relatively lower pay compared to universities and non-budgeted colleges and accordingly stepped down their level of effort and investment? Be that as it may, in 2013, overall satisfaction with budgeted colleges is similar to that of universities but lower than that of non-budgeted colleges.

The findings suggest that the higher Overall Satisfaction was with the higher-education institution in 2011, the higher the Executive Pay in that higher-education was in the following year. Furthermore, the higher the Executive Pay was in 2012, the higher the level of Overall Satisfaction was in the subsequent year.

The Beta coefficient for executive pay as an independent variable is significantly lower than the Beta coefficient for Overall Satisfaction as an independent variable (see Table 4 in Study 1 and Table 4 in Study 2 above). It may therefore be concluded that satisfaction (performance) influences pay much more significantly than pay does satisfaction (performance). Consequently and with respect to the chicken-egg dilemma, it may be hypothesized that satisfaction (performance) causally precedes pay in the model linking pay to performance.

One might also conclude that higher satisfaction (performance) might lead an increase in demand for the institution, an increase in tuition income and consequently, an increase in executive pay.

Top management should be motivated to improve institutional performance, recruit and development high quality teaching staff, provide students with generous grants and generally create a unique organizational culture and campus atmosphere.

Yet, high executive pay, rewarded to top management, might lead negative consequences such as negative public reactions and lower budgets directed towards institutional development. It can also lead to problematic labor relations, given the widening gap between management and labor in these institutions.

All the above hypotheses are worthy of further investigation and deeper analysis of the complex relationship between executive pay and customer satisfaction.

References

- Barak, R., Cohen, S., & Lauterbach, B. (2007). CEO Pay in Israel and its Relations to Firm Performance and Ownership Structure. *Economic Quarterly*, 54, 205-228.
- Ben-Shahar, H. (2000). University Organization as a Basis for Academic Excellence – The Case for a Unitary Structure. *Academia*, 7-8, 16-21.
- Cameron, K. S. (1984). The Effectiveness of Ineffectiveness, B.M. Staw & L. L. Cummings (eds.). *Research in Organizational Behavior*, JAI Press. Greenwich, Conn.
- Daft, R. L. (1998). *Organization Theory and Design*. South-Western College Publishing. CIN. Ohio.
- Eisenhauer, J. G. (2003). Regression through the Origin. *Teaching Statistics*, 25, 76–80.

<http://dx.doi.org/10.1111/1467-9639.00136>

- Finkelstein, S., Hambrick, D. C., & Cannella, A. A. Jr. (2009). *Strategic Leadership: Theory and Research on Executives, Top Management Teams and Boards*. Oxford, U.K; Oxford University Press.
- Fombrun, C. & Shanley, M. (1990). What's in The Name? Reputation Building and Corporate Strategy. *Academy of Management Journal*, 33, 233-258. <http://dx.doi.org/10.2307/256324>
- Friedlander, F., & Pickle, H. (1968). Components of Effectiveness in Small Organizations. *Administrative Science Quarterly*, 13, 289-304. <http://dx.doi.org/10.2307/2391456>
- Furtado, E. P. H., & Karan, V. (1990). Causes, Consequences, and Shareholder Wealth Effects of Management Turnover: A Review of the Empirical Evidence. *Financial Management*, 19(2), 60-75. <http://dx.doi.org/10.2307/3665635>
- Gilber, G. (2000). Universities and Mini-universities. *Academia*, 7-8, 12-15.
- Graham, M. (2010). CEO Compensation at Publicly-Traded Companies. Research Department, Bank of Israel. 1-53. <http://www.boi.org.il>
- Ilani, O. (2009). State Comptroller Report on Higher Education: Pay Excesses in the Name of Academic Freedom. *Haaretz*. <http://www.haaretz.co.il/misc/article-print-page/1.1250907>
- Jones, C. D., & Cannella, A. A. Jr. (2011). Alternate Configurations in Strategic Decision Making. IN: M.A. Carpenter (ed). *The Handbook of Research on Top Management Teams* (pp. 15-34). Edward Elgar, Cheltenham, UK, Northampton, MA, U.S.
- Jongbloed, B., & Vossensteyn, H. (2001). Keeping up Performances: An International survey of performance-based funding in higher education. *Journal of Higher Education Policy and Management*, 23(2), 127-145. <http://dx.doi.org/10.1080/13600800120088625>
- Kashti, O. (2014a). Private Education Pays Off, at Least for Managers. *Haaretz*. <http://www.haaretz.co.il/news/education/.premium-1.2244253>
- Kashti, O. (2014b). Executive Pay in the Private Colleges: The Party Goes On. *Haaretz*. <http://www.haaretz.co.il/news/education/.premium-1.2438325>
- Kast, F. E., & Rosenzweig, J. E. (1986). *Organization and Management – A Systems and Contingency Approach*. International edition: McGraw-Hill book company.
- Levi, A. (2013). Description and Analysis of the Higher-Education Budget in Recent Years. Knesset Research and Information Center, Jerusalem. 1-16.
- March, J. G., & Sutton, R. I. (1997). Organizational performance as dependent variable. *Organizational Science*, 8(6), 698-706. <http://dx.doi.org/10.1287/orsc.8.6.698>
- Mintzberg, H. (1983). *Power In and Around Organizations*. Prentice Hall, Inc. Englewood Cliffs, N. J.
- Montgomery, D. C., & Peck, E. A. (1982). *Introduction to Linear Regression Analysis*. John Wiley and sons.
- Moran-Zelikovich, Y. (2009). The "Crumbling" Academia presents: A Feast of Pay and Benefits. *Yedioth Aharonoth*. <http://www.ynet.co.il/articles/0,7340,L-3687263,00.html>
- O'Brien, R. M. (2007). A Caution Regarding Rules of Thumb for Variance Inflation Factor. *Quality & Quantity*, 41(5), 673-690. <http://dx.doi.org/10.1007/s11135-006-9018-6>
- Pfeffer, J., & Salancik, G. (1978). *The External Control of Organizations: A Resource Dependence View*. Harper & Row. N. Y.
- Pundak, H. (2012). *Calcalist* Investigation: Pay Feast in Colleges – at the Expense of the Public. *Calcalist*.
- Rabinovich, A. (2009). The University in a Global World: The New Dilemmas of Higher Education. *New Directions*, 20, 88-100.
- Soen, D. (2004). Centre and Periphery in Higher Education – Second Opportunity for Whom? *Education and Context: Kibbutzim College of Education Yearly*, 26, 153-166.
- State Comptroller. Audit Report on the System of Higher Education. March 2009.
- Vancil, R. (1987). *Passing the baton*. Harvard University Press. Boston. MA.
- Ward, A., Amason, A. C., Lee, P. M., & Graffin, S. D. (2011). The Scapegoating Premium: a rational view of new CEO compensation. IN: M.A. Carpenter (ed). *The Handbook of Research on Top Management Teams* (pp.349-372).

Edward Elgar, Cheltenham, UK, Northampton, MA, U.S.

Zahor, Z. (2005). Universities in the Making, or Just Colleges? *Panim – Journal of Culture, Society and Education*, 34, 15-20.

Appendix

Table 7. Findings from multiple regression for predicting Executive Pay in 2012

The independent variables	Executive Pay in 2012		Collinearity Statistics	
	beta	Sig	VIF	Tolerance
Overall Satisfaction in 2011	0.13	0.251	1.06	0.939
Dummy variable: Universities	0.78	0.0001	2.86	0.349
Dummy variable: Budgeted Colleges	0.89	0.0001	3.29	0.304
Dummy variable: Non-budgeted Colleges	0.29	0.158	2.29	0.437
Regression constant	594.3	0.996	-	-
$R^2=0.66$, Adj- $R^2=0.61$, $n=34$, $p=0.0001$				

Table 7 above presents findings from multiple regression analysis (with the regression constant) for predicting Executive Pay in 2012. The findings suggest that the regression model is statistically significant, explaining 66% of the variance in Executive Pay in 2012 ($R^2=0.66$, $p=0.0001$). Overall Satisfaction in 2011 was not found to influence Executive Pay in 2012. The dummy variables Universities and Budgeted Colleges were found to have a positive, statistically significant influence on Executive Pay in 2012. That being said, the current model has been found to suffer from a multicollinearity problem, mainly stemming from the dummy variable Budgeted Colleges. The tolerance value of this variable is the lowest in the model (Tolerance=0.30), which means that the explained variance of this variable by means of all other independent variables is $R^2=0.70$, that is, higher than the explained variance of the "original" dependent variable in the model (Executive Pay in 2012), namely $R^2=0.66$. This finding points to a multicollinearity problem in the model (O'Brien, 2007). One of the recommended solutions in the methodological literature to handle this problem, which we adopted in this case, is to use a regression model through the origin (Montgomery & Peck, 1982; Eisenhauer, 2003).



This work is licensed under a [Creative Commons Attribution 3.0 License](https://creativecommons.org/licenses/by/3.0/).