THE UNIVERSITY OF TENNESSEE MARTIN
COLLEGE OF BUSINESS AND GLOBAL AFFAIRS

JOURNAL OF INTERNATIONAL BUSINESS DISCIPLINES

www.jibd.org

The International Academy of Business Disciplines

Volume 18, Number 1 May 2023

Published By:
University of Tennessee at Martin and the International Academy of Business Disciplines

Journal of International Business Disciplines

Volume 18, Number 1 May 2023

Chief Editor:
Ahmad Tootoonchi
College of Business and Global Affairs
University of Tennessee at Martin
100 Business Administration Building
231 Lovelace Avenue
Martin, TN 38237
Tel: 731-881-7227
Tootoonchi@utm.edu

Editor:
Michele A. Krugh
University of Pittsburgh
4200 Fifth Avenue
Pittsburgh, PA 15260
Tel: 412-526-4271
michele.krugh@pitt.edu

Published By:
University of Tennessee at Martin and the International Academy of Business Disciplines

ISSN 1934-1814 WWW.JIBD.ORG

THE UNIVERSITY OF TENNESSEE MARTIN
COLLEGE OF BUSINESS AND GLOBAL AFFAIRS

JOURNAL OF INTERNATIONAL BUSINESS DISCIPLINES
www.jibd.org

The International Academy of Business Disciplines

OFFICERS

Journal of International Business Disciplines

Volume 18, Number 1 May 2023

Editorial Note

The May 2023 issue of the *Journal of International Business Disciplines (JIBD)* has been the result of a rigorous process of blind reviews, and in the end, the reviewers recommended three articles for publication in this issue of *JIBD*.

JIBD is committed to maintaining high standard of quality in all of its publications.

Ahmad Tootoonchi, Chief Editor
Journal of International Business Disciplines

HOW CSR AFFECTS EMPLOYEES' INTRINSIC MOTIVATION ACROSS THREE DIFFERENT GENERATIONS

C. Christopher Lee, Central Connecticut State University
christopher.lee@ccsu.edu

Donghwi Seo, Central Connecticut State University
donghwiseo@ccsu.edu

Youngseon Kim, Central Connecticut State University
ykim@ccsu.edu

ABSTRACT

This research explores whether an employee's intrinsic motivation is significantly affected by five different types of Corporate Social Responsibility (CSR) – Environment-related CSR, Human Rights and Labor-related CSR, Product Responsibility-related CSR, Community Engagement-related-CSR, and Corporate Governance-related CSR. In addition, this study examines whether this impact varies across employee generations. Samples were obtained from 546 respondents spanning three generations – Gen X, Gen Y, and Gen Z. A regression analysis was conducted for each generation. Empirical evidence shows that CSR significantly increases employees' intrinsic motivation, and this impact is moderated by employee generation. Specifically, only environmental CSR was significantly related to intrinsic motivation for Gen X; environmental, product responsibility, and community engagement CSR were significant for Gen Y; environmental CSR and human rights and labor-related CSR were significant for Gen X employees.

INTRODUCTION

Fostering employees' intrinsic motivation is one of the critical elements for a successful business. Employees who are more intrinsically motivated use self-leadership strategies more effectively to improve their job performance than their counterparts who are not intrinsically motivated (Steinbauer et al., 2018). A link exists between CSR and brand reputation, which has become increasingly important in attracting, motivating, and retaining a workforce from younger generations (Hedger, 2006). An employee's feeling of pride through CSR activities is well observed in empirical studies (Kim & Scullion, 2013).

Much research has investigated CSR's positive impacts on employee work motivation. Prior studies suggest that generational differences moderate the influence of factors affecting employee motivation. Potocan et al. (2013) found that demographic variables, including age, significantly impact employee intrinsic motivation. For instance, Rank and Contreras (2021) proposed that older

generations place more emphasis on environmental impacts. Ruiz and Davis (2017) found that the younger generations are more likely to leave their workplace because of poor work conditions than the older generations. Torsello (2019) discovered that Gen Y's intrinsic motivation was heavily swayed by organizational culture, task clarity, work-life balance, and human resource management. Considering that there is a generational difference in employee motivation, examining how it would moderate the impact of CSR on employee motivation is meaningful. It will help us understand complex mechanisms among employee generation, CSR, and employee motivation. Recent research hints that age or generation influences employees' acceptance of their companies' CSR activities. For example, Reavis et al. (2017) found that GOV-CSR positively impacts only millennials' intrinsic motivation. McGlone et al. (2011) found that millennial employees who valued CSR were more likely to volunteer than non-millennials who also valued CSR. Tan et al. (2019) discovered that eco-friendly labeling more significantly impacts the younger generation as they are more responsive to green products. However, few studies provided a holistic picture of generational differences in the impact of CSR on employees' intrinsic motivation. In addition, no study examined how all five different types of CSR – Environment-related CSR (ENT-CSR), Human Rights and Labor-related CSR (HRL-CSR), Product Responsibility-related CSR (PR-CSR), Community Engagement-related CSR (CE-CSR), and Corporate Governance-related (GOV-CSR) would affect employee motivation and how this impact would vary depending on employee generation. Therefore, this research explores whether the impact of CSR on employees' intrinsic motivation can be different among three employee generations in the workplace. Specifically, it examines three generations, such as Gen X, Gen Y, and Gen Z employees, to see the impact of (1) ENV-CSR, (2) HRL-CSR, (3) PR-CSR, (4) CE-CSR, and (5) GOV-CSR, on employees' intrinsic motivation during the Covid-19 pandemic.

We collected data for this research through an online Amazon Mechanical Turk survey. This research will fill the gap between the CSR and employee motivation literature by adding a moderating role of employee generation.

LITERATURE REVIEW AND THEORETICAL DEVELOPMENT

Environment-related CSR and Intrinsic Motivation

Employees may find their work more meaningful and fulfilling and become more motivated when they feel that their affiliated organization takes care of environmental issues (Rank & Contreras, 2021), such as water, energy, and material use, minimizes pollutants during the production of products and services, and makes a significant investment to protect the environment. Graafland and Gerlagh (2019) investigated how management's perception of corporate environmental practices led to increased motivation. Bartik et al. (2013) also found that a firm's environmental protection and CSR activity positively impact employee intrinsic motivation. Cho (2015) found that intrinsically motivated employees tend to be conscious of environmental issues leading to more support for adequate sustainability package labeling for consumers' awareness. Venger and Pomirleanu (2017) found that companies can enhance brand image through social issues and environmental CSR messaging campaigns, thereby improving employee morale and motivation.

Singh et al. (2010) reported that environmental CSR increased employee productivity. Therefore, we propose a research hypothesis as follows:

Hypothesis 1a: Environment-related CSR is positively related to employees' intrinsic motivation.

Environment-related CSR, Intrinsic Motivation, and Employee Generation

Demographic variables, including age, significantly impact employee perception of environmentally-focused CSR (Dokadia et al., 2015). Younger generations tend to be more concerned about the environment; they support eco-labeling and recycling waste information and are willing to pay more for environmentally friendly products (Tan et al., 2019). Potocan et al. (2013) found that demographic variables, such as age and gender, partially affect the relationship between employees' ethical behavior and their attitudes toward environmental concerns and concern for society. Dokadia et al. (2015) found significant differences among four groups (Baby Boomers, Silent Generation, Gen X, and Gen Y) in the impact of ENV-CSR on employee motivation. Extending this study, we posit that the impact of ENV-CSR on employee motivation would be stronger for the younger generation. It is because, compared to older generations, the younger generation tends to emphasize extrinsic rewards such as financial compensation more than environmental issues (Potocan et al., 2013; Rank & Contreras, 2021). Therefore, the above arguments make us expect the following:

Hypothesis 1b: Generations moderate the effects of ENV-CSR on employees' intrinsic motivation in the workplace, such that ENV-CSR is more positively related to the intrinsic motivation of the older generations.

Human Rights and Labor-related CSR and Intrinsic Motivation

Employees are strongly motivated by an organization's active engagement in supporting human rights and labor-related activities, such as protecting employee rights in their workplace, allowing for freedom of organized labor, protecting against discrimination, and supporting healthcare benefits for employees (Fasterling, 2016; Heinemann et al., 2013; O'Connor et al., 2016). O'Connor et al. (2016) found that employees fused ethical responsibilities to develop a perception of their employer's labor-related CSR activity during the labor dispute (O'Connor et al., 2016). This finding indicates that there might be a relationship between labor-related CSR and employee intrinsic motivation. Conchie (2013) discovered a positive association between an organization's active engagement in creating a safe working environment and employee intrinsic motivation. Employee intrinsic motivation can be boosted by the degree to which organizations actively maintain safety protocols to make a workplace safe. Thus, we hypothesize:

Hypothesis 2a: Human Rights and Labor-related CSR positively affects employees' intrinsic motivation.

Human Rights and Labor-related CSR, Intrinsic Motivation, and Employee Generation

Younger generations are more interested in human rights and labor-related activities such as working conditions, employee rights, and work-life balance than older generations (Cyfert et al., 2021; Ruiz & Davis, 2017; Spivack & Milosevic, 2018). Specifically, prior studies have consistently shown that the younger generation's intrinsic motivation is influenced by an employer's support for organizational culture, task clarity, and work-life balance to a greater level than the older generation (Torsello, 2019). Younger generations tend to value a workplace where job enrichment activities motivate employees and create favorable work conditions (Ruiz & Davis, 2017). They are more likely to be intrinsically motivated by their affiliated organization's active engagement in labor and human-rights activity. Ruiz and Davis (2017) reported that Gen Y showed a stronger urge to leave the firm than older generations when it does not support these labor-related activities. Cyfert et al. (2021) report that Gen Z employees show significantly lower intrinsic motivation when their employers actively implement layoffs and outsourcing. These findings suggest that younger generation employees are less likely to be intrinsically motivated when employers do not support labor- and employee-right activity. Therefore, we propose a hypothesis as follows:

Hypothesis 2b: Generations moderate the effects of HRL-CSR on employees' intrinsic motivation in the workplace, such that HRL-CSR is more positively related to the intrinsic motivation of younger generations.

Product Responsibility-related CSR and Intrinsic Motivation

Consumers generally prefer more, rather than less, effective sustainability claims in product packaging, enabling them to make informed decisions that conserve natural resources and attenuate the environmental impact (Cho, 2015). A firm's emphasis on product sustainability, such as clearly labeling product information, explaining products/services for customers, and taking care of customer complaints, increases consumers' positive perception of the firm. Venger and Pomirleanu (2017) found that a company's active engagement in PR-CSR positively influences the company's brand evaluations and brand image. In line with these research findings, we argue that a company's PR-CSR initiatives can also enhance employee intrinsic motivation. It is because employees are more likely to be intrinsically motivated by accounting for ethical responsibility. Employees may be strongly satisfied that they work for the 'right thing' by taking care of ethical responsibility. For instance, employees working at medical device firms that take care of their patients and allow their patients to speak directly to healthcare professionals show higher intrinsic motivation (Lee et al., 2014). Venger and Pomirleanu (2017) also found that companies can enhance their brand image through ethically responsible product-related CSR messaging, improving employee morale and intrinsic motivation. So we propose:

Hypothesis 3a: Product Responsibility-related CSR positively relates to employees' intrinsic motivation.

Product Responsibility-related CSR, Intrinsic Motivation, and Employee Generation

Younger generations tend to seriously consider product responsibility, like customer privacy (Barraies et al., 2015). For example, customer privacy is essential in developing trust in a company amongst Gen Y (Barraies et al., 2015). Young consumers between 18 and 25 were highly motivated, showing superior buying decisions for green products, mainly depending on situational attributes such as eco-labeling (Zhao & Lee, 2018). Younger generation employees seem more likely to be intrinsically motivated when an organization actively implements PR-CSR activities. That is, they put much emphasis on the product responsibility-related value as customers as well as employees. Besides, younger generation employees feel guilty when their firms provide products that do not align with their values (Tan et al., 2019). Therefore, we hypothesize:

Hypothesis 3b: Generations moderate the effects of PR-CSR on employees' intrinsic motivation in the workplace, such that PR-CSR is more positively related to the intrinsic motivation of younger generations.

Community Engagement-related CSR and Intrinsic Motivation

Van Schie et al. (2019) found that if employees can self-select the cause for which they are intrinsically motivated to participate in corporate volunteer work, they are more likely to develop a volunteer identity. Campione (2016) found that volunteer work can provide needed intrinsic motivation, which enhances employees' on-the-job behavior that is then absorbed in their work and engagement in positive citizenship. Santos and Fernandez (2017) concluded that corporate volunteering could increase job satisfaction, learning, motivation, productivity, and leadership. Alhassan et al. (2016) discovered a positive relationship between employee intrinsic motivation with healthcare workers who participated in community engagement. Talò (2017) found that individuals intrinsically motivated to engage the community on social or political levels will have a keen sense of community and social well-being. Based on these findings, we hypothesize as follows:

Hypothesis 4a: Community Engagement-related CSR is positively related to employees' intrinsic motivation.

Community Engagement-related CSR, Intrinsic Motivation, and Employee Generation

Younger generations tend to emphasize the "help others" value more than older generations. According to McDougle et al. (2011), younger generations show stronger support for volunteerism across all three volunteerism categories (egoistic, altruistic, biospheric) than older generations. For instance, Ertas (2016) showed millennials are more likely to participate in community engagement-related activities than baby boomers. Zhao and Lee (2018) found that younger consumers are more likely to favor products from businesses that promote a "help others" CSR

message in their advertising campaigns, while older consumers are more likely to favor products that are associated with "help self." Campione (2016) found that volunteer work enhances millennials' intrinsic motivation and job satisfaction because engaging in corporate volunteer activities stimulates younger generations to feel meaningful in their work and to build additional psychological, personal, and social resources. These findings support the idea that CE-CSR, such as corporate volunteer activities, provides stronger intrinsic motivation among the younger generation than previous generations (Ertas, 2016). Furthermore, McGlone et al. (2011) discovered that incorporating CE-CSR into an organization's strategic plan would effectively recruit and retain millennials and young generation employees. Therefore, we predict the following:

Hypothesis 4b: Generations moderate the effects of CE-CSR on employees' intrinsic motivation in the workplace, such that CE-CSR is more positively related to the intrinsic motivation of younger generations.

Corporate Governance-related CSR and Intrinsic Motivation

Employees are one of the primary stakeholders in modern organizations. Thus, executing GOV-CSR, such as avoiding corruption in business and providing a company's financial information to the public, tends to characterize a value-based organization, which provides its employees with a vocational alignment with the company's identity and mission (Bruni & Smerilli, 2009). Value-based organizations tend to look for intrinsically motivated employees to hire (Bruni & Smerilli, 2009), so employees are likely to have a high intrinsic motivation when the organization implements vigorous GOV-CSR activities. Chakraborty et al. (2018) found a solid and positive relationship between a firm's intense GOV-CSR activities and employees' intrinsic motivation. Javed et al. (2017) also found that GOV-CSR is essential for employees' benefiting from organizational success, which suggests that GOV-CSR plays a crucial role in affecting employees' higher intrinsic motivation. Therefore, we predict the following:

Hypothesis 5a: Corporate Governance-related CSR is positively related to employees' intrinsic motivation.

Corporate Governance-related CSR, Intrinsic Motivation, and Employee Generation

As employees get old, their mindset is likely to shift from value-based to profit-based, suggesting younger-generation employees tend to emphasize the value of the organization rather than profit, compared to older-generation employees (Godkin, 2014; Reavis et al., 2017). For instance, GOV-CSR is likely to affect younger-generation employees more than older-generation employees (Reavis et al., 2017). Godkin (2014) found that a firm's active implementation of corporate governance strengthens younger employees' engagement and ethical voice more than older employees'. Fahad and Rahman (2020) found that the disclosure of financial statements is likely to increase younger generation employee motivation more than older generation employee motivation. Furthermore, Duller (2013) found that corporate governance could instead negatively

impact older-generation employees because they tend to have a passive perspective in managing firms. Therefore, we propose the following hypothesis:

Hypothesis 5b: Generations moderate the effects of GOV-CSR on employees' intrinsic motivation in the workplace, such that GOV-CSR is more positively related to the intrinsic motivation of younger generations.

METHOD

Conceptual Model

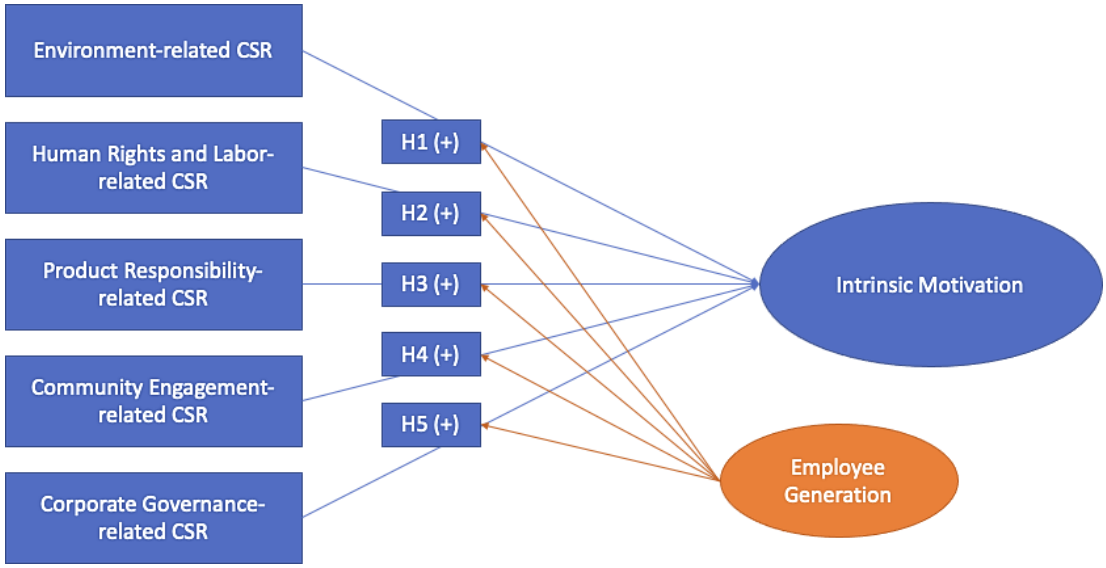

FIGURE 1. CONCEPTUAL MODEL

Sample and Data Collection

We collected the survey data using Amazon Mechanical Turk. We ran the survey for a week in the third week of April 2020 (N = 220) and the fourth week of August 2020 (N = 350). In addition, we collected 39 surveys from senior students and MBA students in a public university in the New England region. In sum, we collected 609 valid responses. We deleted nine repeated responses and 24 responses with multiple missing values, which resulted in 576. Out of the 576 responses, we excluded the 42 inadequate responses of poor response quality. We used six items with reverse codes to identify the wrong responses. We ended up with 534 sample cases for this research. Many of our participants were Gen Y, followed by Gen Z, then Gen X, and lastly, Boomers. The sample data includes 133 responses from Gen Z (24.9%), 304 responses from Gen Y (56.9%), 84 responses from Gen X (15.7%), and 13 responses from Boomers (2.4%).

Dependent Variable - Intrinsic Motivation

Intrinsic motivation served as the dependent variable for this study. Grant (2008) examined three dimensions of employee motivation (intrinsic motivation, extrinsic motivation, and prosocial motivation). The article defined intrinsic motivation as the desire to expend effort based on interest in and enjoyment of the work. We chose three items from Grant (2008) to measure employee intrinsic motivation at the workplace, using a seven-point Likert scale (1 being strongly disagreed, 7 being strongly agreed): Why are you motivated to do your work? (1) Because I enjoy the work itself, (2) Because it's fun, (3) Because I find the work engaging.

Environment-related CSR Variable (ENV-CSR)

ENV-CSR served as an independent variable for this study's first hypothesis. Global Reporting Initiative (GRI) (2012) proposed multiple items to measure ENV-CSR, which was used by Woo and Jin (2012). To measure ENV-CSR variable, we adopted Woo (2013) which chose three items from GRI (2012) and Woo and Jin (2013): I think the company I work for tries to (1) Take care of water, energy, and material uses, (2) Minimize pollution when produce products/services, (3) Invest to protect environments.

Human Rights and Labor-related CSR Variable (HRL-CSR)

HRL-CSR was independent variable for the second hypothesis. According to Woo and Jin (2012), HRL-CSR practices may include non-discrimination, collective bargaining rights, child labor laws, security practices, and the rights of indigenous peoples. Using GRI (2012) and Woo and Jin (2012), Woo (2013) developed the HRL-CSR variable with three items: I think the company I work for tries to (1) Protect human rights at workplaces, (2) Allow the freedom of labor union and forbid discrimination, (3) Clarify health care benefits for employees.

Product Responsibility-related CSR Variable (PR-CSR)

PR-CSR was an independent variable for the third hypothesis. Using GRI (2012) and Woo and Jin (2013), Woo (2013) developed the PR-CSR variable with two items: I think the company I work for tries to (1) Clearly label/explain products/services for customers, (2) Take care of customer complaints.

Community Engagement-related CSR Variable (CE-CSR)

CE-CSR was an independent variable for the fourth hypothesis. Woo (2013) developed the CSR variable with five dimensions, including social and economic dimensions. This study picked one item from the social dimension and another item from the economic dimension to measure this CE-CSR variable: I think the company I work for tries to (1) Invest to develop local community welfare, (2) Consider the indirect impacts of the marketing programs on society.

Corporate Governance-related CSR Variable (GOV-CSR)

GOV-CSR (GOV-CSR) was an independent variable for the fifth hypothesis. Like the CE-CSR variable, we picked one item from the social dimension and another item from the economic dimension from Woo (2013) to measure the GOV-CSR: I think the company I work for tries to (1) Avoid corruption in business, (2) Provide the company financial information to the public.

Moderating Variable – Employee Generation

Dhopade (2016) defined Gen Z as employees born from 1993 to 2011. Other studies described Gen Z as people born after 1994 (Bateh, 2019), born between 1995 and 2015 (Kasasa, 2020), born from 1996 to 2010 (Brown et al., 2019), or born from 1997 to 2013 (Schroth, 2019). In short, most of the literature suggested Gen Z employees were born anytime between 1993 to 1997. Using a median value from 1993 to 1997 for the beginning of Gen Z birth year appeared fair. Accordingly, this research used the median value of 1995. Thus, employees were categorized into three generations in this study as of April 2020: (1) Gen Z: 18 to 24, (2) Gen Y: 25 to 39 (3) Gen X: 40 to 55 years old.

Regression Model

This study proposed three regression models to test the research hypotheses. When developing the models, we used a subsample analysis instead of a two-way interaction design to examine the moderating effects of employee generation as we hypothesized. This method allowed us to compare the impact of each independent variable on the dependent variable among different employee generations. The subsample approach reduces the possibility of noise entering the regression models (Stone-Romero & Anderson, 1994). A general regression model was expressed:

$$Y_j = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5$$

where Y_j = Intrinsic Motivation [j = 1 (Gen X), 2 (Gen Y), 3 (Gen Z)]
X_1 = ENV-CSR

X_2 = HRL-CSR
X_3 = PR-CSR
X_4 = CE-CSR
X_5 = GOV-CSR

RESULTS

Descriptive Statistics and Correlation

Table 1 shows 534 participants and descriptive statistics (mean and standard deviation) of each variable and Pearson correlations. The intrinsic motivation variable was significantly correlated with ENV-CSR ($p < .001$), HRL-CSR, PR-CSR, CE-CSR, and GOV-CSR ($p < .01$).

TABLE 1. DESCRIPTIVE STATISTICS AND CORRELATIONS

	Mean	SD	N	(1)	(2)	(3)	(4)	(5)	(6)
(1) Intrinsic Motivation	4.7924	1.6912	534	1					
(2) ENV-CSR	4.5354	1.5850	534	.435***	1				
(3) HRL-CSR	5.3346	1.3247	534	.384**	.540**	1			
(4) PR-CSR	5.6648	1.1395	534	.255**	.263**	.533**	1		
(5) CE-CSR	4.8077	1.5384	534	.406**	.644**	.665**	.366**	1	
(6) GOV-CSR	5.0824	1.3582	534	.320**	.487**	.623**	.449**	.666**	1

Note: *$p < .05$, **$p < .01$, ***$p < .001$

Regression Analysis Results for All Generations

According to Table 2, the regression model for all data (Model 1, N=534) was statistically significant ($R^2 = .233$, $p < .001$). ENV-CSR and CE-CSR were significantly related to Intrinsic Motivation ($p < .05$), while GOV-CSR showed no statistical significance. HRL-CSR and PR-CSR showed marginal significance. According to the standardized regression coefficient BETA, ENV-CSR (.271) was the most related to Intrinsic Motivation, followed by CE-CSR (.132), HRL-CSR (.111), and PR-CSR (.077). No serious multicollinearity was present in the regression model because all variance inflation factors (VIFs) were less than 10 (Vittinghoff et al., 2012), and the condition index (C.I.) was less than 30 (Kennedy, 2003).

Regression Analysis Results for Gen X Employees

The Gen X regression model (Model 2 in Table 2) was statistically significant ($R^2 = .297$, $p < .001$). ENV-CSR was significantly related to Intrinsic Motivation ($p < .05$), while the HRL-CSR, PR-CSR, CE-CSR, and GOV-CSR showed no statistical significance. According to the

standardized regression coefficient BETA, Intrinsic Motivation was impacted the most by the ENV-CSR (.458), followed by HRL-CSR (.130), PR-CSR (.126), CE-CSR (.093), and GOV-CSR (-.225). No serious multicollinearity was present in the regression model [VIFs < 10 and C.I. < 30].

Regression Analysis Results for Gen Y Employees

According to Table 2, the regression model for Gen Y employees (Model 2) was statistically significant ($R^2 = 0.210$, $p < .001$). ENV-CSR and CE-CSR were significantly related to Intrinsic Motivation ($p < .01$). PR-CSR was marginally significant ($p = 0.076$), while HRL-CSR and GOV-CSR showed no statistical significance. According to the standardized regression coefficient BETA, Intrinsic Motivation was impacted the most by the employee ENV-CSR (.234), followed by CE-CSR (.187), PR-CSR (.116), GOV-CSR (.027), and HRL-CSR (.001). No serious multicollinearity was present in the regression model [VIFs < 10 and C.I. < 30].

Regression Analysis Results for Gen Z Employees

The regression model for Gen Z employees (Model 4 in Table 2) was statistically significant ($R^2 = 0.378$, $p < .001$). ENV-CSR and HRL-CSR were significantly related to intrinsic motivation ($p < .01$). PR-CSR, CE-CSR, and GOV-CSR showed no statistical significance. According to the standardized regression coefficient BETA, Intrinsic Motivation was impacted the most by the HRL-CSR (.448), followed by ENV-CSR (.276), GOV-CSR (.060), CE-CSR (-.041), and PR-CSR (-.070). No serious multicollinearity was present in the regression model [VIFs < 10 and C.I. < 30].

TABLE 2. SUMMARY OF REGRESSION MODEL RESULTS

Model	**1**	**2**	**3**	**4**
Data	All Data	Gen X	Gen Y	Gen Z
ENV-CSR	.271***	.458***	.234**	.276**
HRL-CSR	.111#	.130	.001	.448***
PR-CSR	.077#	.126	.116#	-.070
CE-CSR	.132*	.093	.187*	-.041
GOV-CSR	-.004	-.225	.027	.060
R^2	.233	.297	.210	.378
R^2_{adj}	.226	.253	.197	.354
F	32.76***	6.829***	15.979***	15.769***
C.I.	18.646	22.361	19.310	16.100
N	534	84	304	133

Note: #$p < .10$, *$p < .05$, **$p < 0.01$, ***$p <. 001$; Standardized regression coefficient BETA are reported; DV = Dependent Variable; C.I. = Condition Index

DISCUSSION

Hypothesis 1a

Evidence supported Hypothesis 1a - ENV-CSR is positively related to employees' intrinsic motivation. The results showed that ENV-CSR was significantly related to intrinsic motivation ($p < .001$). The results were consistent with the literature, which supported the claim that ENV-CSR positively impacted intrinsic motivation (Bartik et al., 2013; Ginder et al., 2019; Graafland & Gerlagh, 2019; Singh et al., 2010). ENV-CSR remains vital as employees are more consciously concerned with the future of the planet. Knowing this, employers may influence employees' intrinsic motivation by engaging in more ENV-CSR activities.

Hypothesis 1b

Evidence shows weak support for Hypothesis 1b - generations moderate the effects of ENV-CSR on employees' intrinsic motivation in the workplace, such that ENV-CSR is more positively related to the intrinsic motivation of the older generations. The results show that ENV-CSR was significant among all generations in the regression models. However, data showed slightly more significance in older generations, Gen X and Gen Y ($p < .001$), than in the younger generation, Gen Z ($p < .01$). The results were inconsistent with prior studies (Dokadia et al., 2015; Kim & Austin, 2019; Potocan et al., 2013; Rank & Contreras, 2021). They reported that younger generations show declining importance attributed to intrinsic value as an extrinsic value was more highly rated on their goals than the older generation. The differences may be attributed to the increasing technological and social awareness from brands for environmental and sustainability efforts to be more relevant and attractive to consumers. With the influx of messages/advertisements about the impacts of sustainability on the environment, all generations are likely to be concerned about ENV-CSR and thus can positively relate to the intrinsic motivation of all generations.

Hypothesis 2a

Evidence shows weak support for Hypothesis 2a - HRL-CSR is positively related to employees' intrinsic motivation. The results showed that HRL-CSR was marginally significant in relation to intrinsic motivation ($p = .056$). The results were consistent with prior studies that supported the claim that HRL-CSR positively impacted intrinsic motivation (Conchie, 2013; Fasterling, 2016; Heinemann et al., 2013; O'Connor et al., 2016). The differences may be attributed to the pandemic resulting in more employees working from home, reducing the number of complaints and problems that would otherwise arise in an office setting.

Hypothesis 2b

Evidence marginally supports Hypothesis 2b - generations moderate the effects of HRL-CSR on employees' intrinsic motivation in the workplace such that HRL-CSR is more positively related to the intrinsic motivation of younger generations. The results show that HRL-CSR was significant for only Gen Z ($p < .001$). The results were inconsistent with prior studies (Cyfert et al., 2021; Ruiz & Davis, 2017; Spivack & Milosevic, 2018; Torsello, 2019). They reported that younger generations show declining importance attributed to intrinsic value, as extrinsic values were negatively correlated. The differences may be attributed to different economic conditions amongst each generation. The importance of human rights and labor laws has drastically changed, which affects how each generation views the impact of intrinsic motivation.

Hypothesis 3a

Evidence showed marginal support for Hypothesis 3a - PR-CSR is positively related to employees' intrinsic motivation. The results showed that PR-CSR was marginally significant in relation to intrinsic motivation ($p = .089$). The results are consistent with prior studies (Cho, 2015; Feldman & Vasquez-Parraga, 2013; Lee et al., 2014; Venger & Pomirleanu, 2017). The differences may be attributed to the societal impact on consumers. Over the years, the focus on bringing the best products forward to consumers from corporations has increased. Now, consumers can get quality products from employees who enjoy being customer-centric.

Hypothesis 3b

Evidence supported Hypothesis 3b - Generations moderate the effects of PR-CSR on employees' intrinsic motivation in the workplace such that PR-CSR is more positively related to the intrinsic motivation of younger generations. The results show that PR-CSR was significant only among the Gen Y regression model ($p < .05$). The results were consistent with prior studies (Barraies et al., 2015; Janssen et al., 2013; Tan et al., 2019; Zhao & Lee, 2018). They reported that younger generations have shown themselves to be easily influenced by guilt when purchasing non-ecofriendly products. The differences can be attributed to being selfless versus selfish. Older generations have shown themselves intrinsically motivated by products to help themselves. Younger generations have shown themselves intrinsically motivated by products to help others.

Hypothesis 4a

Evidence supported Hypothesis 4a expecting that CE-CSR was significantly related to intrinsic motivation ($p < .05$) for all generations. The results are consistent with prior studies (Alhassan et al., 2016; Santos & Fernandez, 2017; van Schie et al., 2019; Talò, 2017). These studies found that

community engagement, in general, positively affected employees. For example, volunteer work increased job satisfaction, learning, motivation, productivity, and leadership. These studies also showed that employers benefit from CSR strategies incorporating community engagement into the employee curriculum as these employers gain an improved image, reputation, and notoriety. We attribute the differences to increased societal emphasis on the importance of outreach and engagement efforts for organizations and individuals. The age of social media has made these efforts highly visible, and engagement efforts are often praised on social media platforms. When people or organizations are applauded for their community engagement work, they will likely be more motivated as employees.

Hypothesis 4b

Evidence showed weak support for Hypothesis 4b - generations moderate the effects of CE-CSR on employees' intrinsic motivation in the workplace such that CE-CSR is more positively related to the intrinsic motivation of younger generations. CE-CSR showed statistical significance ($p < .05$) for Gen Y only but not statistically significant for Gen Z or Gen X. The results confirmed prior studies which reported that millennials (Gen Y) have higher intrinsic motivation in the workplace when participating in community-related activities than other generations (Campione, 2016; Ertas, 2016; McGlone, 2011). The difference could be attributed to Gen Y employees being more comfortable in their careers and less focused on advancing their career paths. In contrast, Gen Z employees may focus more on proving themselves in the workplace. Gen X, the oldest employee demographic, is nearing retirement age and may be less likely to engage directly with the community. These employees may be more focused on leisure activities in their free time.

Hypothesis 5a

Evidence was inconclusive for hypothesis 5a expecting that GOV-CSR was insignificant to intrinsic motivation ($p = .937$). These results were inconclusive with prior studies (Bruni & Smerilli, 2009; Chakraborty et al., 2018; Javed et al., 2017; Markus & Swift, 2020). These studies found a positive relationship between GOV-CSR and employee intrinsic motivation. For example, Markus & Swift (2020) discovered that more robust corporate governance erodes the inventor's productivity and intrinsic motivation, while Chakraborty et al. (2018) concluded that companies with strong corporate governance had higher intrinsic motivation rates. The differences can be attributed to employees' belief systems in whether corporate governance supports their work or provides rules and strips employees of creative autonomy. In addition, there are many different components to corporate governance. Lack of support in corporate governance and increased intrinsic motivation could have looked at performance management and controls, while the positive relationship between corporate governance and intrinsic motivation could have been focused on corporate culture and transparency.

Hypothesis 5b

Evidence was inconclusive for hypothesis 5b - generations moderate the effects of GOV-CSR on employees' intrinsic motivation in the workplace such that GOV-CSR is more positively related to the intrinsic motivation of younger generations. The results showed that GOV-CSR was not statistically significant for Gen X (p = .400), Gen Y (p = .696), or Gen Z (p = .594). It may be because employees are not directly involved in company procedures and policies and are more focused on their everyday experiences. While hierarchy and board committees are not components employees can control, they may shift their focus to other categories that they can control to increase intrinsic motivation.

Managerial Implications

The results have shown important implications for firms using CSR activities to boost their employees' intrinsic motivation. Based on the findings of this study, ENV-CSR, HRL-CSR, PR-CSR, and CE-CSR should significantly affect employees' intrinsic motivation in the workplace. Therefore, business organizations should actively implement the five types of CSR activities as their priority in planning CSR strategy. Our results also propose that a firm's CSR strategy differs depending on employee generation. Specifically, only ENV-CSR was significantly related to intrinsic motivation for Gen X, while ENV-CSR, PR-CSR, and CE-CSR were significant for Gen Y. For Gen Z employees, ENV-CSR and HRL-CSR were significantly related to their intrinsic motivation.

Our research findings suggest that firms increase their employees' intrinsic motivation by actively engaging in ENV-CSR, HRL-CSR, PR-CSR, and CE-CSR. Organizations can increase employees' intrinsic motivation by launching more CSR initiatives and activities, offering a fun and challenging atmosphere that entails inherent satisfaction in the workplace. However, managerial decisions surrounding CSR practices should consider employees' age demographics to maximize intrinsic motivation in the workplace. Our study provides meaningful implications to business organizations regarding CSR initiatives and their impact on employee motivations because managers can learn how to create an ideal workplace environment to maximize employee productivity while ensuring employee satisfaction.

LIMITATIONS AND FUTURE RESEARCH

This study examined the impact of a firm's different types of CSR on employees' intrinsic motivation in their workplace and how this impact varies depending on employee generation, such as Gen X, Y, and Z. In doing so, this research contributes to the existing literature on employee motivation and CSR. This study could be improved in several ways. Further studies may investigate intrinsic motivation in specific career roles. Different careers may have different motivating factors. For instance, what may motivate one profession may not necessarily motivate

another. The samples could be separated by salary, indicating the importance of what factors motivate employees most. In addition, for better accuracy, sample sizes could be more extensive and equal amongst each generation, and samples could have been taken from different companies' sectors, fulfilling the professional diversity concern. Another way to improve this study would be to have sample sizes from diverse types of locations, such as urban versus rural communities as well as samples from higher and lower socioeconomic populations.

REFERENCES

Alhassan, R. K., Nketiah-Amponsah, E., Spieker, N., Arhinful, D. K., & Rinke de Wit, T. F. (2016). Assessing the impact of community engagement interventions on healthcare motivation and experiences with clients in primary health facilities in Ghana: A randomized cluster trial. *PLoS ONE, 11*(7), 1-19. DOI:10.1371/journal.pone.0158541.

Bartik, D., Hoeltl, A., & Brandtweiner, R. (2013). The leverage of corporate environmental protection concepts on employee motivation. *University of Applied Sciences BFI, 173,* 55-66. DOI:10.2495/SDP130051.

Bateh, D. (2019). Leadership from millennials to Gen Z transformed. *Journal of Advanced Management Science, 7*(1), 11-14.

Barraies, S., Yahia K. B., & Hannachi, M. (2016). Identifying the effects of perceived values of mobile banking applications on customers: Comparative study between baby boomers, Gen X and Gen Y. *International Journal of Bank Marketing, 35*(6), 1018-1038. DOI:10.1108/IJBM-09-2016-0137.

Brown, O., Shallcross, D., & Stuebs, M. (2019). What it takes for accounting firms to recruit Gen Z: Organizational culture and opportunities for career growth are the top factors today's students seek in an employer. *Journal of Accountancy*, *228*(6), 37.

Bruni, L., & Smerilli, A. (2009). The value of vocation: The crucial role of intrinsically motivated people in values-based organizations. *Review of Social Economy, 67*(3), 271–288.

Campione, W. A. (2016). Volunteer work experience: Can it help millennials to find meaning and interest in their work and to negotiate their role within the workplace? *Journal of Leadership, Accountability and Ethics, 13*(3), 11-27.

Chakraborty, A., Gao, L., & Sheikh, S. (2018). Corporate governance and risk in cross-listed and Canadian only companies. *University of Massachusetts Boston, 57(*10), 2740-2757.

Cho, Y.-N. (2015). Different shades of green consciousness: The interplay of sustainability labeling and environmental impact on product evaluations. *Journal of Business Ethics, 128*(1), 73-82. DOI:10.1007/s10551-014-2080-4.

Conchie, S. (2013). Transformation leadership, intrinsic motivation, and trust: A moderated-mediated model of workplace safety. *Journal of Occupational Health Psychology, 18*(2), 198-210. DOI:10.1037/a0031805.

Cyfert, S., Glabiszewski, W., & Zastempowski, M. (2021). Impact of management tools supporting industry 4.0 on the importance of CSR during COVID-19. Gen Z. *Energies, 14*(6), 1642-1655. DOI:10.3390/en14061642.

Dhopade, P. (2016). Support Gen Z. *Benefits Canada, 40*(2), 22–23.

Dokadia, A., Rai, S., & Chawla, D. (2015). Multigenerational differences in work attributes & motivation: An empirical study. *The Indian Journal of Industrial Relations, 51*(1), 81-96.

Duller, C. (2013). Corporate governance of family firms in subsequent generations. *International Business & Economics Research Journal, 12*(3), 345-354.

Ertas, N. (2016). Millennials and volunteering: Sector differences and implications for public service motivation theory. *University of Alabama at Birmingham, 40*(3), 517-558.

Fahad, P., & Rahman, P. M. (2020). Impact of corporate governance on CSR disclosure. *International Journal of Disclosure and Governance*, *17*(2-3), 155–167.

Fasterling, B. (2016). Human rights due diligence as risk management: Social risk versus human rights risk. *Business and Human Rights Journal*, *2*(2), 225–247.

Feldman, P. M., & Vasquez-Parraga, A. Z. (2013). Consumer social responses to CSR initiatives versus corporate abilities. *Journal of Consumer Marketing*, *30*(2), 100–111.

Ginder, W., Kwon, W.-S., & Byun, S.-E. (2019). Effects of internal–external congruence-based CSR positioning: An attribution theory approach. *Journal of Business Ethics*, *169*(2), 355–369. DOI:10.1007/s10551-019-04282-w.

Global Reporting Initiative (GRI). (2012). Global Reporting Initiative Sustainability Report 2010/11. https://www.globalreporting.org/resourcelibrary/GRI-Sustainability-Report-2010- 2011.pdf.

Godkin, L. (2014). Mid-management, employee engagement, and the generation of reliable sustainable corporate social responsibility. *Journal of Business Ethics*, *130*(1), 15–28.

Graafland, J., & Gerlagh, R. (2019). Economic freedom, internal motivation, and corporate environmental responsibility of SMEs. *Environmental and Resource Economics, 74*, 1101-1123. DOI:10.1007/s10640-019-00361-8.

Grant, A. M. (2008). Does intrinsic motivation fuel the prosocial fire? Motivational synergy in predicting persistence, performance, and productivity. *Journal of Applied Psychology, 93*(1), 48-58. DOI:10.1037/0021-9010.93.1.48.

Hedger, M. (2006). Are you getting the big picture? *Engineering Management, 16*(6), 14-17.

Heinemann, F., Hennighausen, T., & Moessinger, M.-D. (2013). Intrinsic work motivation and pension reform preferences. *Journal of Pension Economics & Finance, 12*(2), 190-217.

Hur, W.-M., Moon, T.-W., & Ko, S.-H. (2016). How employees' perceptions of CSR increase employee creativity: Mediating mechanisms of compassion at work and intrinsic motivation. *Journal of Business Ethics*, *153*(3), 629–644.

Janssen, C., Vanhamme, J., Lindgreen, A., & Lefebvre, C. (2013). The catch-22 of responsible luxury: Effects of luxury product characteristics on consumers' perception of fit with corporate social responsibility. *Journal of Business Ethics*, *119*(1), 45–57.

Javed, M., Rashid, M. A., & Hussain, G. (2017). Well-governed responsibility spurs performance. *Journal of Cleaner Production*, *166*, 1059–1073.

Kasasa. (2020). Boomers, Gen X, Gen Y, and Gen Z explained. https://www.kasasa.com/articles/generations/gen-x-gen-y-gen-z.

Kennedy, P. (2003). *A guide to econometrics*. MIT Press.

Kim, S., & Austin, L. (2019). Effects of CSR initiatives on company perceptions among millennial and Gen Z consumers. *Corporate Communications: An International Journal*, *25*(2), 299–317. DOI:10.1108/ccij-07-2018-0077.

Kim, C. H., & Scullion, H. (2013). The effect of corporate social responsibility (CSR) on employee motivation: A cross-national study. *Poznan University of Economics Review*, *13*(2), 5-25.

Lee, K., Hoti, K., Hughes, J. D., & Emmerton, L. (2014). Dr. Google and the consumer: A qualitative study exploring the navigational needs and online health information-seeking behaviors of consumers with chronic health conditions. *Journal of Medical Internet Research, 16*(12), 1-14. DOI:10.2196/jmir.3706.

Markus, A., & Swift, T. (2000). Corporate governance and the impact to the R&D lab. *Journal of Strategy and Management, 13*(1), 91-110. DOI: 10.1108/JSMA-06-2019-0100.

McDougle, L. M., Greenspan, I., & Handy, F. (2011). Generation green: Understanding the motivations and mechanisms influencing young adults' environmental volunteering. *International Journal of Nonprofit and Voluntary Sector Marketing*, *16*(4), 325–341.

McGlone, T., Spain, J. W., & McGlone, V. (2011). Corporate social responsibility and the millennials. *Journal of Education for Business*, *86*(4), 195–200.

O'Connor, A., Paskewitz, E. A., Jorgenson, D. A., & Rick, J. M. (2016). How changes in work structure influence employees' perceptions of CSR: Millionaire managers and locked-out laborers. *Journal of Applied Communication Research*, *44*(1), 40–59.

Potocan, V., Mulej, M., & Nedelko, Z. (2013). The influence of employees' ethical behavior on enterprises' social responsibility. *Systemic Practice and Action Research*, *26*(6), 497–511. DOI: 10.1007/s11213-013-9299-3.

Rank, S., & Contreras, F. (2021). Do millennials pay attention to corporate social responsibility in comparison to previous generations? Are they motivated to lead in times of transformation? A qualitative review of generations, CSR and work motivation. *International Journal of Corporate Social Responsibility*, *6*(4), 1-13.

Reavis, M. R., Tucci, J. E., & St Pierre, G. (2017). Corporate social responsibility and millennials' stakeholder approach. *Journal of Leadership, (14)*4, 74-83.

Ruiz, C. A., & Davis, A. (2017). Strategies to retain millennial employees at full-service restaurants. *International Journal of Applied Management and Technology*, *16*(1), 166-185. DOI: 10.5590/IJAMT.2017.16.1.11.

Santos, P. G., & Fernandez, J. L. (2017). Strategies for corporate volunteer programs. *Universia Business Review*, *55*, 34–63. DOI: 10.3232/UBR.2017.V14.N3.02.

Schroth, H. (2019). Are you ready for Gen Z in the workplace? *California Management Review*, *61*(3), 5–18. DOI: 10.1177/0008125619841006.

Singh, A., Syal, M., Grady, S. C., & Korkmaz, S. (2010). Effects of green buildings on employee health and productivity. *American Journal of Public Health*, *100*(9), 1665–1668.

Spivack, A. J., & Milosevic, I. (2018). Perceived location autonomy and work environment choice: The mediating influence of intrinsic motivation. *The Journal of Applied Behavioral Science*, *54*(3), 325–348. DOI:10.1177/0021886318764353.

Skudiene, V., & Auruskeviciene, V. (2010). The contribution of corporate social responsibility to internal employee motivation. *Baltic Journal of Management, 7*(1), 49–67.

Steinbauer, R., Renn, R. W., Chen, S., & Rhew, N. (2018). Workplace ostracism, self-regulation, and job performance: Moderating role of intrinsic work motivation. *The Journal of Social Psychology*, *158*(6), 767-783. DOI: 10.1080/00224545.2018.1424110.

Stone-Romero, E. F., & Anderson, L. E. (1994). Relative power of moderated multiple regression and the comparison of subgroup correlation coefficients for detecting moderating effects. *Journal of Applied Psychology, 79*(3), 354–359.

Talò, C. (2017). Community-based determinants of community engagement: A meta-analysis research. *Social Indicators Research*, *140*(2), 571–596.

Tan, C. N. L., Ojo, A. O., & Thurasamy, R. (2019). Determinants of green product buying decision among young consumers in Malaysia. *Young Consumers, 20*(2), 121-137.

Torsello, D. (2019). Gen Y workers: An empirical framework for cultural and organizational aspects. *Department of Economics and Business, 41*(6), 1330-1347.

van Schie, S., Gautier, A., Pache, A.-C., & Guntert, S. T. (2019). What keeps corporate volunteers engaged: Extending the volunteer work design model with self-determination theory insights. *Journal of Business Ethics, 160*(3), 693-712. DOI:10.1007/s10551-018-3926-y.

Venger, O., & Pomirleanu, N. (2017). Linking CSR communication activities to consumer brand evaluations: An examination of mediating and moderating factors linking CSR communication to brand evaluations. *Journal of Promotion Management, 24*(5), 675–693. DOI:10.1080/10496491.2018.1405520.

Vittinghoff E., Glidden, D. V., Shiboski, S. C., McCulloch, C. E. (2012). *Regression methods in biostatistics: Linear, logistic, survival, and repeated measures models* (2nd ed.). Springer.

Woo, H., & Jin, B. (2012, November). Corporate social responsibility communications of global apparel firms: The website analysis of U.S., European, and Asian firms. In C. Ahn, & L. D. Burns (Eds.), *KSCT-ITAA Joint Symposium: Enhancing International Collaborations*. International Textile and Apparel Association (ITAA).

Woo, H. (2013). *Do consumers want a "good" apparel brand? The effects of apparel brands' corporate social responsibility (CSR) practices on brand equity moderated by culture*. [Unpublished master's thesis]. University of North Carolina at Greensboro.

Zhao, W., & Lee, Y.-J. (2018). The moderating effects of status-consumption motive and age in the relationship between CSR advertising appeal type and purchase intentions. *Journal of Promotion Management, 25*(4), 520–540. DOI:10.1080/10496491.2018.1449773.

EFFECT OF STOCK BUYBACKS ON STOCK PRICE, EARNINGS, AND DIVIDEND: AN EMPIRICAL STUDY

Morsheda Hassan, Grambling State University
morshedat@yahoo.com

Raja Nassar, Louisiana Tech University
Rnassar500@gmail.com

Ghebre Keleta, Grambling State University
keleta@gram.edu

ABSTRACT

In this study, we use time series analysis to examine the long-term relationships of buybacks and stock price, earnings per share, and dividend payout for individual firms listed on the Dow Jones Industrial average. If a relationship exists, it is expected to be positive for stock price and earnings per share and negative for dividend payout.

Results from the time series models showed that there were few firms with a significant relationship. Only five firms showed a significant positive relationship between share buyback and stock price, and two firms showed a positive relationship between buyback and earnings per share. Furthermore, only two firms showed a negative relationship between buyback and dividend payout. The weak evidence for a long-term impact of buybacks supports the argument that buybacks do not contribute significantly to the financial strength of a firm and to its market performance.

INTRODUCTION

Stock buybacks are increasing being used by companies to boost their stock price and earnings per share on the market. A stock or share buyback takes place when a company buys back its shares from the marketplace. The repurchased shares are absorbed by the company. This will reduce the number of outstanding shares on the stock market, which can lead to an increase in share price. A company might buy back its shares because it believes that the shares are undervalued or to improve its financial ratios. A company can buy the stock on the open market or from its shareholders. Buybacks in recent decades have been preferred to dividends as a way to return cash to shareholders.

There has been an increase in buybacks in recent decades. According to a Harvard Business Review (2020) report, in the year 2019, stock buybacks by U.S. companies totaled $730 billion dollars. Buybacks have been called into question. Some argue that instead of using their excess cash to buy back their own stocks, companies should reinvest to promote growth and job creation.

The salient benefit of buybacks is that they reduce the number of shares on the stock market, which can lead, all things being equal, to an increase in earnings per share and to an increase in stock price based on the fact that stocks trade in part based on supply and demand. However, it should be noted that the effects of buybacks depend, in the final analysis, on the individual investor.

Buybacks have been used, in place of dividends, to distribute cash and compensate shareholders. However, given a choice, most investors will prefer a dividend over a higher-value stock that is short-lived. The disadvantage of buybacks is the fact that a company's increase in its earning per share is based on reducing its outstanding shares and not on gaining a stronger financial position by increasing its earnings.

Buybacks are controversial because any improvement in price or earning per share tends to be artificial and not related to the company's financial ratios. Also, an increase in share price is usually short-lived and soon the price returns to its equilibrium market value when the investors realize that the company has not done anything to increase its actual value. Investors who buy after the short-term price bump can then lose money. Furthermore, it is argued that this short-term increase in stock price allows insiders to profit.

The Institute for New Economic Thinking (Lazonick et al.,2017) reported that share buybacks in pharmaceutical companies were not used to grow the company, and often money spent on buybacks exceeded funds spent on research and development.

As mentioned earlier, buybacks can lead to a short-term increase in a company's stock price and earnings per share. This is, however, artificial in nature and does not reflect the financial strength of a company. Cash spent on buybacks can be better spent on investment that will strengthen the company's financial position.

Analyses in the literature on time series data predominantly utilize least squares regression with no correction for auto-correlations of residuals or for non-stationarity. This is known to cause inaccuracies in the analysis (Granger, 1974; Nason, 2006). Furthermore, most analyses focused on cross-sectional analysis over firms and on short-term effects of buybacks. It is more informative to study individual firms and long-term effects of buybacks. Hence, in this study, we investigate the long-term relationships of buybacks on stock price, earnings per share, and dividend payout of individual firms listed on the Dow Jones Industrial Average using time series analysis in which non-stationarity and auto-correlations are properly addressed.

LITERATURE REVIEW

Gupta (2017) reported on the effect of a buyback announcement on stock price for different industries on the Bombay Stock Exchange (BSE) in India. Data were taken over the years 2000 to 2015. The study looked for abnormal returns considering 20 days before and 20 days after the buyback announcement. Regression analysis was used to determine if there were significant differences among industries with regard to announcement returns. Results showed that buyback

announcements caused abnormal returns, but only for a short period of time. Also, industry did not have a significant effect on returns.

Busch and Obernberger (2017) investigated the effects of a stock repurchase intensity on stock price efficiency and idiosyncratic risk using panel least squares regression on US market monthly data, from January 2004 to December 2010. Repurchase intensity was measured as the percentage of repurchased shares. Stock price efficiency was determined by the effect of the market return on day t on the stock return on day t (base or contemporaneous market return model) in comparison to the model with a contemporaneous market return on day t and lagged returns on day t-n (n= 1, 2,..5), lagged model. Efficiency was measured as 1- (R^2(base model)/R^2(lagged model). Idiosyncratic risk was measured as the correlation between stock return and market return. The analysis indicated that share buybacks reduced the idiosyncratic risk and increased price efficiency. The effects were more prominent when buybacks occurred in down markets.

Chandren et. al. (2017) studied the effect of accretive share buyback on return on assets (ROA), return on equity (ROE) and Tobin's Q for companies listed on the Bursa Malasia. Least squares regression was used for a sample of 220 companies. The dependent variables were the means over a three-year period of ROA, ROE, and Tobin's Q Accretive buyback was the independent variable, measured as the difference between earnings per share with share buyback and earnings per share without share buyback. Results from the regression analysis indicated that there was a positive relationship between accretive share buyback and ROA, ROE and Tobin's Q over the three-year period.

Evgeniou et. al. (2018), using least squares regression, reported that high stock volatility before a buyback announcement had a positive effect on post-announcement returns for undervalued stocks. The predictability of excess returns after buyback announcements was improved when using undervalued indicators and volatility as predictor variables,

Vafeas et al. (2003) reported on earning management before stock repurchase. The study provided weak evidence of biased accruals reporting by managers before self-tender offers by firms. The evidence came from a comparison of pre-purchase accruals for a sample of self-tendering and matching U.S. firms as a control. Pre-purchase accruals were lower for the self-tendering firms compared to the control. There was also evidence of post-repurchase accrual reversal. The implication was that managers employed earning management, in association with share buybacks, to exploit shareholders.

Gupta (2016) studied the effect of buyback announcements on stock returns, earnings per share (EPS), and return on equity (ROE) for 34 companies on the BSE 500 market index in India during 2010-2014. The analysis, using a t-test, indicated that there was an increase in average returns one day after the announcement and in some cases twenty days after the announcement. EPS increased the first quarter after the announcement and both EPS and ROE annual figures showed an increase one year after the announcement.

Abdoua and Gupta (2019), using multiple regression and multinomial logistic regression, reported on the effect of buyback announcement on cumulative abnormal returns (CAR) over a 3-year

period after the announcement. It was found that the repurchase technique, risk, company size, and revenue affected significantly CAR, while the buyback announcement had no effect on CAR.

Hyderabad (2009) investigated the effect of share buyback announcement in India on the stock price over several days before and after the announcement. Results from the analysis showed that the average abnormal return on the day of announcement was 2.83 percent and the cumulative abnormal returns was 6 percent. The overall cumulative abnormal return was 5.16 percent over a period of 21 days before and after the buyback announcement. Also, it was found that buybacks on the open market had a greater effect on stock price.

Liu et. al. (2016) used a logistic regression model to determine the effect of managerial incentives and overconfidence on the probability of share repurchase. The analysis utilized a panel data of 715 companies listed on the Taiwan Stock Exchange and over the counter for the years 2008 to 2012. Results of the analysis showed that managers who received equity incentives and short-term performance bonuses tend to repurchase shares. In addition, these incentives and bonuses increased when the managers overestimated the prospects of the tender offers.

Stunda (2017) used panel regression to analyze the effect of buybacks on returns for growth and non-growth industries in the US. The analysis was performed over the years 2011-2015 on firms that repurchased shares in the year 2010. Results from the analysis showed that there was a significant relationship between cumulative abnormal returns (CAR) and earnings per year when all the firms were considered in the analysis. Furthermore, it was noted that the relationship between CAR and earnings was stronger for the non-buyback firms than for the buyback firms. This relationship was true for above as well as below average growth industries. In addition, percent-change in stock price was negative, but not significant, for the buyback firms. However, for the non-buyback firms, the percent change in stock price was positive and significant.

Lai et. al. (2017) used regression analysis to investigate the effects of share repurchase and cash dividends on firm's future profitability. The data included the listed companies on the Taiwan Stock Exchange for the years 2002 to 2012. Financial and utility industries were excluded from the data. Results from the analysis showed that share buyback was negatively associated with future earnings. However, this relationship was not significant. On the other hand, cash dividend was significantly and positively associated with future profitability.

Bhargava (2013) in a study of U.S. firms over the period 1996-2005, using panel regression, reported that share buybacks and stock options granted to executives had a negative effect on long-term investments and on expenditure for research and development. This result suggests that share repurchase is unlikely to have a long-term effect on firm's future productivity and profitability.

Keasler and Byerly (2015) studied the long-term effect of stock buybacks on market capitalization. The authors considered three, five-year reference periods (2006-2010, 2007-2011, and 2008-2012). and three, ten-year reference periods (2001-2010, 2002-2011, and 2003- 2012). A t-test was performed to test for significance of the mean difference between beginning and ending market capitalization of each reference period. Results from the study showed that market capitalization declined for the stock buyback portfolio relative to all other stocks.

METHODS

Data

Quarterly data with regard to money, in millions, spent on buybacks by companies listed on the Dow Jones Industrial Average were obtained, for the years 2008 to 2020, from YCharts. Also, data on stock price, earnings per share, and dividend payout over the same quarters for the same companies were obtained utilizing the Wharton Research Data Services (WRDS).

Time series analysis

In this study, we use the transfer function approach in time series to relate a stationary input time series (buyback as the independent variables) to a stationary output time series (stock price, earnings per share, or dividend payout as the dependent variable). In general, the model relating a stationary output series y_t to a stationary input series x_i is expressed as

$$y_t = v(B)\, x_t + \eta(t), \quad (1)$$

where $\eta(t)$, is the residual and

$v(B) = w(B)B^c/d(B)$.

Here, $w(B) = w_0 - w_1B - \ldots - w_sB^s$

$d(B) = 1 - d_1B - \ldots - d_rB^r$.

B is the backshift operator,

and c represents the time delay (or lag) until the input variable x_t produces an effect on the output variable y_t.

We assume that the input series follows an ARMA process, $\frac{\varphi(B)}{\theta(B)}\, x_t$. The function v(B) with its lags is determined from the cross correlations between the white noise input series $\frac{\varphi(B)}{\theta(B)}\, x_t$ and the filtered output series $\frac{\varphi(B)}{\theta(B)}\, y_t$ (Wei, 2006).

Once v(B) is identified, one can express a_t in Eq. (1) as

$$\eta(t) = y_t - v(B)\, x_t \quad (2)$$

and identify the appropriate time series model for Eq. (2). With $\eta(t)$ known, one can determine the final model in Eq. (1).

For this analysis, the independent variable (Buyback) and the dependent variables (stock price, earnings per share, and dividend payout) were tested for stationarity using the Phillips-Perron test

and the augmented Dickey-Fuller test. Where a variable was not stationary, we used its first difference, which was stationary. Thus, all variables that entered the model were stationary.

The final model was checked for adequacy in representing the data by examining the auto-correlations of residuals and the cross-correlations of residuals with buybacks. An adequate model will indicate no significant auto-correlations or cross-correlations. This was the case for all the models presented in Tables 1-3, pointing to the fact that the models were all adequate and correct.

RESULTS AND DISCUSSION

Table 1 presents the model from Equation (1) for each of the firms with price as the dependent variable and buyback as the independent variable. For model representation, the model for 3M can be expressed as

$$\text{Price}(t) - \text{Price}(t\text{-}1) = 0.729 - 0.00769\,(\text{Buybacks}(t) - \text{Buybacks}(t\text{-}1)) + e(t) / (1\text{-}0.463B) \quad (3)$$

Where e(t) represents the independent random errors at time t.

It is seen from the sign of the 0.00769 coefficient that the relationship between the change in Buyback and the price change is negative, but not significant at the 5% level. However, it is significant at the 10% level (p = .10). The negative relationship is not according to expectation, and it indicates that buyback has no positive effect on increasing stock price. Price can be said to be dependent on the investor and is influenced by both external market factors and internal firm financial factors.

If one examines the p values for the coefficients of the independent variable (Buyback), one sees that there were eight firms showing significant relationships at the 5% level between buybacks and stock price. Of these eight, five were positive according to expectation and three negative. On the other hand, 6 were significant at the 10% level, one was positive and 5 negative. These results show little evidence for a positive relationship between stock price and buybacks over the years.

Table 2 gives the time series model for earnings as the dependent variable and Buyback as the independent variable. Considering the coefficient of the independent variable and its p value for each firm, it is seen that only two firms had a significant (at the 5% level) positive relationship between buyback and earnings per share. Three firms showed a negative significant relationship. These results do not support a relationship between buybacks and earnings per share.

Results in Table 3 give the time series model for each firm that relates the independent variable (Buyback) to the dependent variable (Dividend). From the p values for each coefficient of the independent variable, it is seen that there were six firms where the relationship between buybacks and dividends was positive and significant at the 5% level and two where the relationship was negative. In addition, there were three firms showing a positive significant (at the 10% level) relationship between buybacks and dividends.

It is clear that results from the time series analysis do not support the hypotheses that buybacks have a significant relationship with stock price, dividends paid, or earnings per share. The argument for buybacks is that they have a positive effect on returns and earnings per share Also, buybacks are used as a substitute for dividends, in which case one would expect a negative relationship between buybacks and dividends paid. Clearly there is no support for these arguments, at least in the long term. Only five firms showed a positive significant relationship at the 5% level between buybacks and stock price. Two firms showed a significant relationship at the 5% level between buybacks and earnings per share and two firms where the relationship between buybacks and dividends was negative and significant at the 5% level.

The literature reports short-term effects of buybacks. To our knowledge, the present study using state-of-the-art time series analysis is the first long-term study examining the relationship of share buybacks with stock price, earnings per share, and dividend payment on a company basis. The lack of evidence for a long-term effect of buybacks, indicates that a firm's performance in the long run depends on its financial strength and on market factors and not on share repurchase. Buybacks are not known to contribute to a company gaining a stronger financial position.

TABLE 1. TIME SERIES MODELS RELATING STOCK BUYBACK TO STOCK PRICE FOR DIFFERENT COMPANIES LISTED ON THE DOW JONES INDUSTRIAL AVERAGE

Company name	Dependent Variable- Price	Mean	Independent Variable- Buyback	Model for residuals $\eta(t)$
3M	D-Price (t)	0.729	-0.0077 D-Buy(t) (p = 0.10)	$\eta(t) = e(t)/(1-.463B)$
AMEX	D-Price(t)	0.529	0.529 Buy(t-6) (p =.194)	$\eta(t) = e(t)$
Apple	D-Price(t)	102.920	0.0805Buy(t-5) (p = 0.401)	$\eta(t) = e(t)$
Caterpillar	D-Price(t)	3.979	-0.00657 Buy(t) (p = 0.068)	$\eta(t) = e(t)$
Cisco	D-Price(t)	-0.206	0.0004692 Buy(t) (p = 0.043)	$\eta(t) = e(t)/(1+0.325B)$
Coca Cola	D-Price(t)	5.403	-0.00917 Buy(t-7) (p = 0.0001)	$\eta(t) = e(t)$
Disney	D-Price(t)	6.788	-0.00394 Buy(t) (p = 0.0045)	$\eta(t) = e(t)$
Exxon	D-Price(t)	0.088	0.00218 D-Buy(t) (p = 0.053)	$\eta(t) = e(t)/(1+0.336B)$
Goldman Sachs	D-Price(t)	-19.232	0.00803 Buy(t-1) + 0.00704 Buy(t-2) (p = 0.0239, .045)	$\eta(t) = e(t)$

Home Depot	D-Price(t)	1.061	0.00251 Buy(t) (p = 0.054)	$\eta(t) = e(t)/(1+0.408B^4)$
IBM	D-Price(t)	-1.352	0.000946 Buy(t) (p = 0.415)	$\eta(t) = e(t)/(1+0.315B)$
Intel	D-Price(t)	0.28927	0.000342 Buy(t) (p = 0.355)	$\eta(t) = e(t)$
Chase	D-Price(t)	3.379	-0.000288 Buy(t-7) (p = 0.1032)	$\eta(t) = e(t)$
Johnson & Johnson	D-Price(t)	1.523	0.000232 Buy(t) (p = 0.757)	$\eta(t) = e(t)/(1+0.604B^4)$
McDonald	D-Price(t)	4.752	-0.00170 Buy(t) (p = 0.376)	$\eta(t) = e(t)$
Merck	D-Price(t)	0.493	0.000633 Buy(t-1) (p = 0.195)	$\eta(t) = e(t)$
Microsoft	D-Price(t)	5.911	-0.000704 Buy(t) (p = 0.089)	$\eta(t) = e(t)/(1-.906B)$
Nike	Price(t)	83.973	-0.0129Buy(t) (p = 0.0797)	$\eta(t) = e(t)/(1-0.777B)$
Chevron	D-Price(t)	0.703	0.00376 D-Buy(t) (p = 0.3300)	$\eta(t) = e(t)$
Traveler	D-Price(t)	-0.0145	0.00317 Buy(t) (p = 0.195)	$\eta(t) = e(t)/(1+0.248B)$
Pfizer	D-Price(t)	0.101	0.000177 Buy(t) (p = 0.2790)	$\eta(t) = e(t)/(1+0.304B)$
Proctor & Gamble	D-Price(t)	-1.565	0.00178 Buy(t) (p = 0.0693)	$\eta(t) = e(t)$
Unitedhealth	D-Price(t)	-1.286	0.0145 Buy(t-7) (p = 0.0126)	$\eta(t) = e(t)$
Visa	D-Price(t)	4.336	-0.00126 Buy(t) (p = 0.589)	$\eta(t) = e(t)$

Walgreen	D-Price(t)	1.689	(-0.00304 Buy(t-2) / (1 - 0.368B(1) + 0.993 B(2)) (p = 0.0023, 0.0001, 0.0001)	$\eta(t) = e(t)$
Walmart	D-Price(t)	-0.972	0.00137 Buy(t) (p = 0.126)	$\eta(t) = e(t)$

D-Refers to first difference and buy refers to buyback

TABLE 2. TIME SERIES MODELS RELATING STOCK BUYBACK TO EARNINGS PER SHARE FOR DIFFERENT COMPANIES LISTED ON THE DOW JONES INDUSTRIAL AVERAGE

Company name	Dependent variable	Mean	Independent variable	Model for residuals $\eta(t)$
3M	D-Earning (t)	0.125	0.0000608 D-Buy(t) (p = 0.980)	$\eta(t) = e(t)/(1-0.379B + 0.424B^3)$
AMEX	Earning(t)	14.161	0.000336 Buy(t) (p = 0.934)	$\eta(t) = e(t)/(1 -1.404B +0.692B^2)$
Apple	D-Earning(t)	-1.299	0.000228 Buy(t) (p = 0.746)	$\eta(t) = e(t)/(1 + 0.299B)$
Cisco	D-Earning(t)	-0.375	0.000378 Buy(t) (p = 0.342)	$\eta(t) = e(t)/(1-0.186B +1.053B^4 +0.677B^8)$
Coca Cola	Earning(t)	9.377	0.00586 Buy(t) (p = 0.272)	$\eta(t) = e(t)/(1 - 0.778 B) (1 + 0.578 B^4)$
Disney	D-Earning(t)	2.037	-0.00133 Buy(t) (p = 0.115)	$\eta(t) = e(t)/(1+0.852B^4 + 0.357B^8)$
Exxon	D-Earning(t)	-0.384	0.00393 D-Buy(t) (p = 0.245)	$\eta(t) = e(t)/(1-0.428B)$
Goldman Sachs	Earning(t)	165.356	0.00976 Buy(t) (p = 0.502)	$\eta(t) = e(t)/(1-0.986B)$
Home Depot	D-Earning(t)	3.246	-0.00189 Buy(t) (p = 0.0008)	$\eta(t) = e(t)/(1+0.893B^4 +0.678B^8)$

Intel	Earning(t)	27.696	-0.00138 Buy(t) (p = 0.780)	$\eta(t) = e(t)/(1-1.135B+0.509B^2)$
Chase	Earning(t)	-85.652	{0.0142/(1-0.570B)} x Buy(t-2) (p = 0.0001, 0.0001)	$\eta(t) = e(t)$
Johnson &Johnson	D-Earning(1)	3.213	-0.00267Buy(t-1) (p = 0.0509)	$\eta(t) = e(t)/(1+0.594B^4)$
McDonald	Earning(t)	22.468	-0.00516 Buy(t) (p = 0.538)	$\eta(t) = e(t)/(1-0.614B)$
Merck	Earning(t)	48.665	-0.00830 Buy(t) (p = 0.524)	$\eta(t) = e(t)/1-0.412B)$
Microsoft	D-Earning(t)	0.178	0.000145 Buy(t) (p = 0.8570)	$\eta(t) = e(t)/(1+0.84B^4 +0.735B^8)$
Nike	D-Earning(t)	-0.254	0.00265 D-Buy(t) (p = 0.2765)	$\eta(t) = e(t)/ (1 - 0.386 B) (1 + 0.669B^4)$
Traveler	D-Earning(t)	6.55309	-0.00948 Buy(t-4) (p = 0.1685)	$\eta(t) = e(t)/ (1 - 0.298 B) (1 + 0.540B^4)$
Pfizer	Earning(t)	10.563	0.00215 Buy(t-1) (p = 0.266)	$\eta(t) = e(t)/(1-0.797B + 0.274B^3)$
Proctor & Gamble	Earning(t)	1.396	-0.00118 Buy(t) (p = 0.660)	$\eta(t) = e(t)/(1-0.755B)$
Unitedhealth	D-Earning(t)	1.761	-0.00222 Buy(t-4) (p = 0.0498)	$\eta(t) = e(t)/(1 - 0.557 B)(1 + 0.898 B^4)$
Visa	Earning(t)	41.902	0.00504 Buy(t) (p = 0.664)	$\eta(t) = e(t)/ (1 - 0.818B) (1 + 0.655 B^4)$

Walgreen	Earning(t)	8.805	0.00170 Buy(t) (p = 0.248)	$\eta(t) = (e(t) - 0.912\ e(t-1))/(1+0.603B^4)$
Walmart	Earning(t)	-8.649	0.0134 Buy(t-2) (p = 0.0271)	$\eta(t) = e(t)/(1-0.8B)$

D-refers to first difference and buy refers to buyback

TABLE 3. TIME SERIES MODELS RELATING STOCK BUYBACK TO DIVIDEND FOR DIFFERENT COMPANIES LISTED ON THE DOW JONES INDUSTRIAL AVERAGE

Company name	Dependent variable	Mean	Independent variable	Model for residuals $\eta(t)$
3M	D-Dividend(t)	0.094	0.000525 D-Buy(t) (p = 0.407)	$\eta(t) = e(t)/(1-0.681B + 0.292B^4)$
AMEX	D-Dividend(t)	-0.319	0.000575 Buy(t) (p = 0.393)	$\eta(t) = e(t)/(1-0.433B)$
Apple	D-Dividend(t)	-69.355	-0.00256 Buy(t) (p = 0.0228)	$\eta(t) = e(t)/(1-0.99B)$
Caterpillar	D-Dividend(t)	0.072	0.0000543 Buy(t) (p = 0.827)	$\eta(t) = e(t)/(1-824B)$
Coca Cola	D-Dividend(t)	-0.538	{0.000271 /(1-0.606B)} Buy(t-2) (p = 0.022, 0.0044)	$\eta(t) = e(t)/(1-0.472B)$
Exxon	D-Dividend(t)	-0.0328	0.000219 D-Buy(t) (p = 0.104)	$\eta(t) = e(t)/ (1 - 0.774\ B)x (1 + 0.619B^4)$
Goldman Sachs	D-Dividend(t)	0.516	0.000191 Buy(t) (p = 0.871)	$\eta(t) = e(t)/(1-0.693B+0.333B^3)$
Home Depot	D-Dividend(t)	1.355	-0.000666 Buy(t-4) (p = 0.0261)	$\eta(t) = e(t)/(1- 0.348B) (1+ 830B4)$
IBM	D-Dividend(t)	-1.113	0.000203 Buy(t-2) (p = 0.0518)	$\eta(t) = e(t)/(1-0.854\ B)(1 + 0.624\ B^4)$

Intel	D-Dividend(t)	-0.567	0.000257 Buy(t-2) (p = 0.0712)	η(t) = (e(t) + e(t-4))/(1-0.703B)
Chase	D-Dividend(t)	-18.998	0.00569 Buy(t-8) (p = 0.0001)	η(t) = e(t)/(1-0.358B)
McDonald	Dividend(t)	25.246	0.00172 Buy(t) (p = 0.2043)	η(t) = e(t)/(1-0.744B – $0.256B^4$)
Merck	Dividend(t)	0.220	0.0000442 Buy(t) (p = 0.494)	η(t) = e(t)/ (1 - 0.775 B) (1 + $0.751B^4$)
Nike	D-Dividend(t)	-0.406	0.000453 Buy(t-1) (p = 0.382)	η(t) = e(t)/(1-0.698B)
Chevron	D-Dividend(t)	0.0359	{0.00152/(1-.685B)} x D-Buy(t-1) (p = 0.0001, 0.0001)	η(t) = e(t)/(1-0.366B)
Traveler	D-Dividend(t)	-1.299	0.000602 Buy(t) + 0.00127 Buy(t-1) (p = 0.1412, 0.0029)	η(t) = e(t)/(1-0.709B + $0.341B^2$)
Pfizer	D-Dividend(t)	-0.157	-0.0000287 Buy(t) (p = 0.882)	η(t) = e(t)/(1-0.531B + $0.529B^3$)
Proctor and Gamble	D-Dividend(t)	-0.574	0.000109 Buy(t-3) + 0.000148 Buy(t-4) (p = 0.0219, 0.0219)	η(t) = e(t)/(1-0.703B)
Unitedhealth	Dividend(t)	97.409	-0.000995 Buy(t) (p = 0.965)	η(t) = e(t)/(1-0.344B + $0.644B^2$)
Visa	Dividend(t)	131.798	0.00386 Vuy(t) (p = 0.6385)	η(t) = e(t)/1-0.996B)

Walgreen	D-Dividend(t)	-0.565	0.000244 Buy(t-1) + 0.000212 Buy(t-2) (p = 0.067, 0.109)	$\eta(t) = e(t)/(1-0.99B)$
Walmart	D-Dividend(t)	-0.858	0.000261 Buy(t) (p = 0.198)	$\eta(t) = e(t)/ (1 - 0.706 B) (1 + 0.998B^4)$

D-refers to first difference and buy refers to buyback

CONCLUSION

Share buybacks are often used by companies to boost their stock price and earnings per share and as a substitute for dividend payout. Studies in the field have shown that share buybacks tend to increase share price in the short-term after the buyback announcement. Of importance is to determine if buybacks are related to stock price, earnings per share, and dividend payout of a company over the long-term in years. In this study, we investigate this relationship using time series analysis on quarterly data from 2008 to 2020 for individual firms listed on the Dow Jones Industrial Average. The analysis corrected for non-stationarity and auto-correlation arising in time series data. Results of the analysis showed little evidence of a relationship between buybacks and share price, earnings per share, and dividend payout. Of eight firms which showed a significant relationship at the 5% level between buybacks and stock price, five were positive relationships, as expected, and three were negative. Two firms showed a significant positive relationship between buybacks and earnings per share and in three firms the relationship was negative, contrary to expectation.

Furthermore, six firms showed a significant positive relationship between buybacks and dividend payout, which is contrary to expectation, and only two firms showed a negative relationship according to expectation. Results showing no evidence for long-term effects of buybacks is in agreement with results by Lai et. al. (2017), Bhargava (2013), and Keasler and Byerly (2015).

The fact that there is little evidence of a relationship between buybacks and a company's share price, earnings per share, or dividend payout supports the argument that buybacks do not contribute significantly to the financial strength of a company, which is the guiding factor in its performance.

REFERENCES

Abdoua, K., & Gupta, P. (2019). How are stock repurchases being used? A long-term study. *Banking and Finance Review, 11*, 1–31.

Bhargava, A. (2013). Executive compensation, share repurchases and investment expenditures: Econometric evidence from U.S. firms. *Rev Quant Finan Acc, 40,* 403–422.

Busch, P., & Obernberger, S. (2017). Actual share repurchases, price efficiency, and the information content of stock prices. *The Review of Financial Studies, 30,* 324–362.
Chandren, S., Ahmad, Z., & Ali, R. (2017). The impact of accretive share buyback on long-term firm performance. *Int. Journal of Economics and Management, 11,* 49–66.
Evgeniou, T., de Fortuny, E., Junqué, N., & Vermaelen, T. (2018). Volatility and the Buyback Anomaly. Journal of Corporate Finance. 49, 32–53.
Gupta, M. (2017). Share Buyback and Announcement Effects: An Industry Wise Analysis. *FIIB Business Review. 6,* 43–50.
Gupta, V. (2016). Impact of buyback of shares on stock prices and financial performance of companies in India. *Prajnan, 45,* 61–82.
Granger, C. W. J., & Newbold, P. (1974). Spurious regressions in econometrics. *Journal of Econometrics, 2,* 111–120.
Harvard Business Review. (2020). Profits without Prosperity. https://hbr.org/2014/09/profits-without-prosperity.
Hyderabad, R. L. (2009). Price performance following share buyback announcements in India *VISION—The Journal of Business Perspective, 13,* 60–79.
Keasler, T., & Byerly, R. T. (2015). An examination of corporate stock buybacks: Do they really create value? *Economics, Management, and Financial Markets, 10,* 11–28.
Lazonick, W., Hopkins, M., Jacobsen, K., Sakinç, M. E., & Tulum, O. (2017). U.S. *Pharma's Financialized Business Model* (Working Paper No. 60). Institute for New Economic Thinking. https://www.ineteconomics.org/uploads/papers/WP_60-Lazonick-et- al-US-Pharma-Business-Model.pdf.
Liu, T. Y., Liu, L. L., & Diaz, J. F. (2016). Effect of managerial overconfidence and compensation on share repurchase: Empirical evidence from Taiwanese firms. *AAMJAF, 12,* 153–179.
Lai, H. H., Lin, S. H., Hsu, A. C., & Chang, C. J. (2017). Share repurchase, cash dividend and future profitability. *The International Association of Organizational Innovation, 9,* 101–109.
Nason, G. P. (2006). Stationary and non-stationary time series. In H. M. Mader, S. G. Coles, C. B. Connor, L. J. Connor (Eds.), *Statistics in volcanology.* Geological Society of London.
Stunda, R. A. (2017). Corporate stock buybacks: Do they enhance or worsen company performance over time? *Quarterly Journal of Finance & Accounting. 55,* 1–26.
Vafeas, N., Vlittis, A., Katranis, P., & Ockree, K. (2003). Earnings management around share repurchases: A note. *ABACUS, 39,* 262–272.
Wei, W. S. (2006). *Time series analysis: Univariate and multivariate methods.* Addison-Wesley.

RECRUITMENT OF INTERNATIONAL STUDENTS AT U.S. COLLEGES AND UNIVERSITIES IN TRANSITION

Nader H. Shooshtari, The University of Montana
nader.shooshtari@umontana.edu

ABSTRACT

U.S. colleges and universities have traditionally attracted the largest number of international students compared to any other country. This influx brought opportunities for international students while providing U.S. higher education institutions additional revenue and a diverse student body. Beginning with the Trump Administration's inward tilt, the welcome mat for international students was removed and the COVID pandemic added to the uncertainty and difficulty of accepting international students to U.S. and indeed much of the western countries that traditionally served as destinations for international students. Post-pandemic international student enrollment is on the increase with significant decline in the number of Chinese students coupled with a marked surge in the number of international students from India. Meanwhile, other countries like the U.K., Australia, and Canada have increased their international student enrollment. This paper explores the path forward to attracting international students to U.S. colleges and universities.
Keywords: International Education, College Recruiting, International Student Recruitment

INTRODUCTION

According to the *2019 Open Doors Report on International Educational Exchange* (Institute for International Education), the number of international students set an all-time high in 2018-2019 academic year, the fourth consecutive year with more than one million international students. The international students accounted for 5.5 percent of the total U.S. higher education population and contributed $44.7 billion to the U.S. economy in 2018 (Institute of International Education, 2019). The U.S. has been the destination of choice for international students. China was the largest source of international students in the U.S. with some 370,000 students followed by India, South Korea, Saudi Arabia and Canada topping off the top five. Most of the international students opted for STEM (science, technology, engineering and mathematics) fields of study with engineering and computer science being the two most popular fields of study among international students.

Despite the increase in total numbers in major part because of the Optional Practical Training program that allows international students to stay in the U.S. to work for up to three years after graduating while staying on their student visas; from 2016 on, the number of enrolled international students declined - 2.4 percent decline at the undergraduate, 1.3 percent at the graduate, and 5 percent for nondegree students (Redden, 2019).

The combination of the Trump Administration's policies toward allowing international students into the U.S., especially those from China and the shut down due to COVID let to the significant decline of the international student numbers attending U.S. higher education institutions. According to a *Forbes* report by Anderson (2019), even before the pandemic, new international student enrollment in the U.S. fell by 10% between 2015-2016 and 2018-2019 academic years during the Trump Administration even before the pandemic. This was followed by a sharp increase in enrollment of international students in other countries, particularly Australia and Canada. According to a survey of 500 universities by Institute for International Education (2019), the decline of new enrollment of international students was likely to continue. The Trump Administration imposed restrictions on visa issuance, curtailed Optional Practical Training, denied H-1B visa petitions at a historically high rate and imposed a rule, barring international students who unknowingly violated their immigration status for 10 years from the U.S.

The negative impact of COVID on international travel has certainly impacted international student attendance. However, the policies that were instituted during the Trump Administration encouraged many international students to seek other destinations for their higher education, such as Canada and Australia which saw significant increases in international student enrollment. Furthermore, as higher education matures in countries such as China, there is less incentive for students to study abroad, and we should continue to see increased enrollment in other European countries such as France, Germany and Netherlands.

The Biden Administration is hoping to attract tens of thousands of international students who stayed away from U.S. campuses during the Trump Administration and the pandemic. The foreign enrollment declines cost U.S. some $10 billion in lost revenue last year (Fischer & Aslanian, 2021). Under the current Administration, the U.S. government announced a "renewed commitment" to promote the United States as a study destination for international students as well as the benefits of global academic engagement. The joint statement of Departments of State and Education tried to address a decrease in international student interest to study in the U.S. due mostly to policies considered unwelcoming under the previous administration (Esaki-Smith, 2021).

INTERNATIONAL STUDENT RECRUITMENT IN TRANSITION

The benefits of recruiting international students to the U.S. are many. First, it provides an opportunity to expose future leaders in business and government in foreign countries to the U.S. system of government and the democratic way of life positively influencing the educated class of these countries. Second, those international students who remain in the U.S. and become part of the workforce contribute significantly to the U.S. economy. It is no secret that many of the successful high tech and entrepreneurial businesses and start-ups were created by immigrants, most of whom initially came to the United States as international students. Indeed, many western countries have created fast track opportunities for educated and talented international students to gain residency and immigrate to these countries helping create a competitive advantage for these economies (Esaki-Smith, 2021). For U.S. colleges and universities, international students contribute not just intellectually to higher education but are a significant source of revenue for them, often paying full fare and giving an economic boost to the communities where they attend

school. At some U.S. universities, international students account for upward of 15% of enrollment—and an even higher share of tuition revenue (Korn, 2020).

In combination, the effect of the previous administration's unfriendly policies toward welcoming international students, the COVID pandemic and greater competition for international students from other countries have served to slow the influx of students to the United States from other countries. Nietzel (2022a) reports that the Biden administration is making a series of policy changes aimed at easing the path for foreign students and professionals in the fields of science, technology, engineering and math to remain in the U.S. on a long-term basis. The changes will expand the number of disciplines that international students can study to qualify to work in the U.S. on their student visas. Students in those disciplines will be permitted to work in the U.S. for three years after graduation, rather than the one year offered to all international students. The Department of Homeland Security is planning to add 22 new eligible degree fields, including data science and financial analytics.

Despite the attempts to address some of the hostile policies of the previous U.S. administration, a recent report by Fischer and Bauman (2022) shows the number of new Chinese students at U.S. colleges and universities plummeted, with visa issuances falling by 45 percent May through August as compared to the same period in 2019. In contrast, 84,000 student visas were issued to Indian students over the summer, a whopping 148 percent increase compared to summer of 2019. Overall, the increase in the number of Indian students more than makes up for the decline in the number of Chinese students for the same period. In another report supporting this trend, the number of U.S. student visas issued to Chinese students declined more than 50% in the first half of 2022 compared to pre-Covid levels. Chinese students are looking elsewhere because of doubts about if they would be welcome in the U.S. and the emergence of more domestic and international alternatives, including the U.K. and Canada. Also, Chinese students have grown pickier about whether to study abroad at all, as Chinese universities have risen in rankings and are viewed more favorably by employers (Hua et al., 2022).

U.S. colleges and universities should consider a number of options in their tool kit for recruiting of international students. According to a recent report by the American Council on Education (ACE) titled "Toward Greater Inclusion and Success: A New Compact for International Students," in fall 2020 total international student enrollment fell by 16% and new international student enrollment dropped by a whopping 43% (Glass et al., 2021). According to the report, safety, program quality, affordability, country reputation, and employment and internship opportunities were the major deciding factors for international students in choosing which school to attend. Unfortunately, the U.S. is considered less safe in comparison to other western countries such as the U.K., Canada, Australia and New Zealand. With regard to program quality, other countries have improved their academic standing and the quality of their programs creating more attractive options for international students compared to the United States. It is imperative that universities and colleges focus more on what matters to international students in their choice of schools (Ammigan, 2019).

With regard to affordability, it is more common for international students nowadays to come from a more diverse socioeconomic background and not from the top echelon of the society in those countries. The implications are obvious. We need to put less emphasis on international students as

cash cows to help solve budget shortfall or financial problems of our colleges and universities. Instead, more emphasis should be placed on providing affordable quality education for international students who contribute to the intellectual rigor and diversity of our higher education institutions providing everyone with a richer academic experience.

The COVID pandemic significantly impacted student mobility across the world, interrupted traditional classroom teaching and learning and diminished the role of a physical campus setting for students. It did, however, by necessity open up new educational opportunities via online, remote and hybrid formats some of which will have a lasting effect and endure post pandemic. Indeed, these formats have now become a part of the mainstream in higher education and how people interact, meet and come together. U.S. colleges and universities can use these new formats in combination with traditional learning formats to offer international students greater flexibility, lower cost and greater access.

If students can complete some or the bulk of their education while staying in their own country, many of the issues with student mobility, entry visas and the living expenses associated with attending school abroad will no longer be obstacles. The affordability of a western education becomes less of a deterrent. However, higher education institutions must rethink what goes into the cost of earning a degree since remote students do not utilize many of the amenities that a brick-and-mortar university offers. The cost of education for international students earning a degree and how to justify those costs becomes more important to how colleges and universities market their programs in light of greater competition from other institutions who are willing to adjust tuition and fees to reflect the new realities. Moreover, the quality of education and the attractiveness of attending a college or university will be judged differently when it is detached from the physical campus setting and the community or country where it is located. In that sense, educational programs have to stand on their own in attracting international students (McGregor, 2021).

To address affordability, length of stay and mobility issues many colleges and universities are forming joint and dual degree program agreements and partnerships with universities abroad. The international students remain and study in their home institution for the first two or three years of their baccalaureate education and then attend partner universities abroad to complete their education. This offers the students the opportunity to interact and live in the host country and earn a degree from their chosen institution abroad. It also gives them the opportunity to take advantage of employment and internship opportunities post-graduation offered by the western universities. An added benefit of such partnership is that the student benefits from college education experiences both at home and abroad. Moreover, many home institutions like to claim these students as their own, since enrollment and student numbers are important considerations for them as well. Many of these partnerships allow the students to earn two degrees, one from the home institution and the other from the college or university abroad where students attend as upper division students. Another major advantage of dual degree programs is alleviating accreditation concerns for the host institutions. For example, AACSB-accredited schools have specific requirements regarding the qualifications of faculty who teach at accredited schools. The dual degree arrangements are considered student transfers whereas joint degrees require that faculty in the home institution meet similar requirements which is often difficult to do.

Post-pandemic, most U.S. institutions are reporting an increase in international student applications - 65% this year compared to 43% last year. Renewed emphasis on in-person recruiting after a couple of years of relying on social media and online recruitment. Also, in-person classes have resumed, with 55% reporting that all their international students attended classes in person in spring 2022, compared to 8% a year ago. Emphasis is on their international students' health, safety and wellbeing (Nietzel, 2022a). The personal approach to recruiting makes sense especially for smaller and medium-sized private and state institutions with limited resources. Such institutions lack the name and recognition to draw a large number of foreign student applicants and need to use personal relations, contacts, alumni networks and agents to help promote to these specific target markets. In a virtual forum sponsored by the *Chronicle of Higher Education* (October 14, 2022), the panelists recommended that colleges get serious about diversifying the international-enrollment pipeline. Half of the international students on American campuses come from China and India, and this overreliance on two countries is a liability for American colleges. Africa should be an important focus, given its explosive growth and significant future potential.

CONCLUSIONS

The policies of the previous U.S. administration put a significant damper on international student enrollments in the United States that persists today. Higher education in the U.S. remains attractive to many international students because of the perceived quality of U.S. colleges and universities. However, the policy changes have taken away the luster and many students have chosen to pursue their education in other countries or forego studying abroad altogether. Currently, the U.S. ranks second after the United Kingdom as the country that is drawing the largest number of students from abroad, a position that would have been unthinkable just a few years ago. Enticing the international students back to U.S. colleges and universities will take time and require serious and sustained effort in earning their trust that they are indeed welcome back and not just paying lip service to the idea. The U.S. has to compete against other western countries who are offering more attractive options with internships, employment opportunities as well as being less costly and considered safer countries. Furthermore, many international students are opting to enroll in colleges at home instead of going abroad. For example, Chinese students have grown pickier about whether to study abroad at all, as Chinese universities have risen in rankings and are viewed more favorably by employers (Hua et al., 2022).

Nietzel (2022b) suggests that U.S. universities face four headwinds in recruiting international students. First, the competition of international students continues to heat up. Second, studying in the United States is expensive, which is important considering many international students nowadays come from a more diverse socioeconomic background and not from the top echelon of the society in those countries. Third, the one-time dependence on Chinese students is difficult to replace for U.S. colleges and universities and replacing them with students from India poses the same danger of overreliance on one or two countries. Lastly, Americans appear to lose some faith in the value of a college education and international skepticism about the quality of American colleges might be one very unfortunate side-effect that will negatively impact international student recruitment.

International students spend a great deal of time and precious financial resources and make sacrifices to study abroad in order to secure more attractive career opportunities and a better life ahead. They should not be pawns in the political gamesmanship between governments. Neither should these students be considered desirable mainly because of the financial benefits to the institutions and treated as cash cows. Their admission to U.S. colleges should be considered based on their individual qualifications and merits. Policies of national governments of their home countries may not be representative of the beliefs and sentiments of these students and they should not be penalized because of it. To do otherwise is unfair and makes winning back international students to U.S. colleges and universities more difficult and uncertain.

REFERENCES

Academic Assembly & International Education Advantage. (2017). Global alumni management for U.S. institutions: The State of the Field in 2017: Realizing the Potential for Recruitment, Brand Awareness, and More. *Academic Assembly and International Education Advantage*. https://academicassembly.com/wp-content/uploads/Global-Alumni-Management-White-Paper-2017.pdf.

ACE. (2020, November 16). *Statement by ACE President Ted Mitchell on the Institute of International Education's 2020 Fall International Enrollment Survey.* American Council on Education. https://www.acenet.edu/News-Room/Pages/Statement-by-ACE-President-Ted-Mitchell-on-the-Institute-ofInternational-Educations-2020-Fall-International-Enrollment.aspx.

ACE. (2021). *Comprehensive Internationalization Framework.* American Council on Education https://www.acenet.edu/Research-Insights/Pages/Internationalization/CIGE-Model-for-Comprehensive-Internationalization.aspx

Adrian, T., Shelley R., Noels, K. A., & Kurt T. (2007). Conflict between international graduate students and faculty supervisors: Toward effective conflict prevention and management strategies. *Journal of Studies in International Education, 11*(1), 90–117. https://doi.org/10.1177/1028315306286313

Altbach, P. G., & Hans D. W. (2017, September 15). The New Nationalism and Internationalisation of HE. *University World News.* http://www.bc.edu/content/dam/files/research_sites/cihe/pdf/UWN_Phil_Nationalism.pd.

Altbach, P. G., & Knight, J. (2007). The internationalization of higher education: Motivations and realities. *Journal of Studies in International Education, 11*(3–4), 290–305. https://doi.org/10.1177/1028315307303542

Ammigan, R. (2019). Institutional satisfaction and recommendation: What really matters to international students? *Journal of International Students, 9*(1), 262–281. https://doi.org/10.32674/jis.v9i1.260

Anderson, S. (2019, November 19). New international student enrollment in U.S. has fallen 10% since 2015. *Forbes.*

Arthur, N. (2017). supporting international students through strengthening their social resources. *Studies in Higher Education, 42*(5), 887–894. https://doi.org/10.1080/03075079.2017.1293876

Esaki-Smith, A. (2021, July 26). US renews commitment to international students and presence on "world stage." *Forbes.*

Fischer, K., & Bauman D. (2022, October 14). Number of Chinese students at U.S. colleges plummeted this fall, visa data show. *The Chronicle of Higher Education, 69*(4).

Fischer, K., & Aslanian, S. (2021). The US attracts fewer international students, loses billions in revenue. Here's why. *NPR.*

Glass, C. R., Godwin, K. A., & Matross Helms, R. (2021). Toward greater inclusion and success: A new compact for international students. *American Council on Education*.

Hua, S., Hao, K., & Korn, M. (2022, August 11). Chinese student visas to U.S. tumble from prepandemic levels; Global competition, strained political ties lead to drop that hits revenue at big and small colleges and universities. *Wall Street Journal.*

Institute for International Education. (2019, November 18). *Number of international students in the United States hits all-time high.*

Korn, M. (2020, July 07). Colleges brace for sharp drop in foreign students, especially from China; New guidance from ICE could prove to be a hurdle for students. *Wall Street Journal*.

McGregor, G. (2021, August 16). U.S. universities face another school year of too few Chinese students. *Fortune.*

Nietzel, M. T. (2022a, June 23). Foreign applications to U.S. Colleges and study abroad by Americans rebound, new report shows. *Forbes.com*

Nietzel, M. T. (2022b, August 13). U.S. universities face headwinds in recruiting international students. *Forbes.*

Redden, E. (2021, March 30). Another uncertain admissions cycle for international students. *Inside Higher Ed.*

Redden, E. (2019, November 18). Number of Enrolled International Students Drops. *Inside Higher Ed.*

JOURNAL OF INTERNATIONAL BUSINESS DISCIPLINES

Volume 18, Number 1 May 2023

Published By:
University of Tennessee at Martin and the International Academy of Business Disciplines

ISSN 1934-1822 WWW.JIBD.ORG

Printed in the USA by University of Tennessee at Martin

Printed in the USA by University of Tennessee at Martin