

**Buying Behaviors of K-12 School Administrators:  
Private Consumption Versus Public Investment**

by

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School administrators are faced with many complex situations and are required to make decisions to best address the needs of their students and school community. As school resources and funds are finite, school administrators are tasked with making investment decisions that will most effectively impact their school systems. These decisions are made without school administrators being required to fulfill any standards in the field of economics. No literature was found that relates the field of economics to public education. The study will assess and teach basic knowledge of economic theories and also examine how K-12 administrators apply this knowledge through simulated case studies about purchasing and investment decisions made within educational systems.

The study design consisted of an analysis of a pre/post-test and case studies to determine what school administrators know about private consumption and public investment and if their knowledge about these concepts increased following a 90-minute workshop. Participants also shared suggestions for future workshops. The participants included 11 school administrators who were enrolled in a doctoral school finance course at the University of Pittsburgh. The pre/post-tests and case study responses were analyzed to determine if their literacy of economics increased over the workshop session and to establish baseline information regarding school administrators' knowledge of these concepts. The study established that administrators increased their understanding of economics, private consumption, and public investment. The findings from this

study may also be used as rationale for post-secondary institutions and school systems to create requirements in coursework and professional development opportunities as the participants verified their lack of knowledge in this area and therefore the need for further exposure to these concepts in the future.

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## Preface

I vividly remember starting this journey three years ago and thinking – “I wonder what the doctoral program at the University of Pittsburgh will entail?!” It has truly been an amazing journey – one that has fostered my deep love of learning, of embracing the discomfort of pushing yourself beyond what you think is possible, and of continually finding and redefining your way in the world. This journey brought together two very different times of my life: my undergraduate work involving economics at Virginia Tech and my current work as an educator and school leader who is passionate about making informed decisions that will benefit educational systems. I am forever grateful for the mentors, teachers, and coaches that have inspired me to always learn, to always grow, and to always see the good in others.

Another amazing journey involves how I decided upon my dissertation topic, the concept of buying behaviors of school administrators. This leads me to my deepest appreciation and gratitude that I have for my dissertation chair and mentor, Dr. Mary Margaret Kerr. I have told you before and I will continue to tell you: your innate ability to balance deep empathy and compassion and tough love and a kick in the tail (when needed!) was everything that I needed and more throughout my doctoral journey. I am forever grateful and will wait for your call/text every time I am at Costco! My dissertation committee members guided and supported me and throughout this journey. Dr. Charlene Trovato who has supported and guided me to relay my passion for my research study into my writing. Professor Ira Weiss whose unique perspective and expertise has pushed me to ask questions and to dig deeper into my research. I admire each one of you and am forever grateful for your guidance and support!

A very special thank you to Tom Kerr, who was the editor for this dissertation. I can talk about soccer and life with you for hours upon hours and I am extremely grateful for all that you have taught me about the writing process. I also greatly appreciate Sarah Dugan who edited this dissertation and provided guidance in my citations and formatting. I am extremely appreciative of your help and support. I am deeply grateful for Scott Conger who offered expertise and support with the statistical analysis in this dissertation.

To my loved ones and support system - not a single day goes by that I don't realize how very lucky and blessed I am. Your unwavering love and support motivate me to be the best human I can be. You all have a beautiful way of challenging me and providing for me. Words can never express what your love means to me. Thank you for teaching me that faith, love, and standing firm in your values, even if you are standing alone, are integral parts of life. There is not a single doubt in my mind that I would not be where I am today without each one of you. I hold you close to my heart in everything that I do. And I always remember, "Every day is a good day, some are just better than others." God bless always and thank you for inspiring me. You are my reason.

## 1.0 Introduction

School administrators make many decisions on how and where to allocate school funds. School boards pass million-dollar budgets every year, while school personnel are tasked with effectively managing and apportioning these funds, which can range in size from \$20 million to \$625 million within the Western Pennsylvania area. Administrators' decisions impact educational programs, the success of students, and the overall effectiveness of school districts. As Crampton, Wood, and Thompson (2015) noted, "The ever-increasing complexity of managing millions of dollars that characterizes virtually every modern school district has added greatly to needs for accountability awareness because the rising price of education increases the need for confidence that good business procedures are in place" (p. 111).

Despite these financial responsibilities, we know little about what factors influence school administrators as they allocate and spend funds within their school systems. Anecdotally, the researcher has observed that school administrators' understanding of economics, consumer buying behavior, and the impact buying behaviors have on K-12 education is limited. To address this gap in knowledge, the researcher will implement and evaluate a workshop to teach K-12 school administrators' basic economic theories. The aim is to improve their understanding of factors that influence school purchasing decisions. The research study will also address misconceptions regarding consumer purchasing decisions and public investment decisions within educational systems.

To understand the problem of practice addressed in this dissertation, the reader requires an introduction to key economic terms as well as an overview of foundational economic theory regarding consumer buying behavior. The following section provides this background. It also

reviews research related to the factors that influence purchasing and investment decisions of K-12 school administrators and delineate between private consumption and public investment in K-12 school systems.

## **2.0 Literature Review**

### **2.1 Key Terms**

Economics is a complex term that has many different meanings and definitions. For the purposes of introducing the concept of economics, several definitions will be provided. Merriam-Webster (n.d.-a) defines economics as “a social science concerned chiefly with description and analysis of the production, distribution, and consumption of goods and services.” According to Brooks (2012), “Most simply put, economics is the analysis of how people use the resources that are available to them.” According to the Library of Economics and Liberty (n.d.), “Economics is about making choices. Economics is not just about money. It is about weighing different choices or alternatives.”

Consumer buying behavior is “a decision-making process that includes recognition of a need or needs, the search of information, and the evaluation of alternatives prior to a decision to purchase is made” (Singh, 2014, p. 18).

According to Rook (1987), impulse buying occurs

When a consumer experiences a sudden, often powerful and persistent urge to buy something immediately. The impulse to buy is hedonically complex and may stimulate emotional conflict. Also, impulse buying is prone to occur with diminished regard for its consequences. (p.191 )

The concept of investing and investment is another complex term that has various definitions and meanings. Merriam-Webster (n.d.-c) defines investment as “the outlay of money usually for income or profit.” According to Crampton et al. (2015), “The concept of investment

in education, versus an attitude of expenditure control, is important because spending for education should take into account the value of education to the economy and to society itself” (p. 20).

In order to introduce public investment, specifically through the lens of educational systems, several definitions are provided. Adamson (2016) claims that “Public investment approaches to education incorporate different sets of rationales and mechanisms, including the principle that the public plays an essential role at all levels of the system.” Bivens (2012) asserts that “Public investment by federal, state, and local governments builds the nation’s capital stock by devoting resources . . . to education (both primary and advanced, as well as job training) that leads to higher productivity and/or higher living standards.”

## **2.2 Economic Consumer Buying Behavior Theories**

Economic theories regarding consumer buying behaviors span an expansive spectrum. From rational decision-making regarding purchases to impulse purchases, the process a person adopts in deciding when and which products or services to purchase is complex. Prasad and Jha (2014) assert, “A consumer purchase is a response to a problem” (p. 335). A consumer can be impacted by marketing strategies, trends in the market, and a variety of other factors. This can occur without the consumer being aware of the influences at play and it is extremely important for school leaders to be aware of such influences. According to Singh (2014), the four factors that influence consumers’ buying behaviors include cultural, social, personal, and psychological factors (Singh, 2014, p. 18). These complex factors impact buying behaviors in various ways and are mediated by a person’s experiences and background. These factors include both internal and

external influences and may not follow fiscally responsible decision-making within the school setting.

The four economic consumer buying theories that underlie the present study include:

- Theory of Reasoned Action
- Principal-Agent Theory
- Motivation-Need Theory
- Hawkins Stern Impulse Buying Theory

What follows is a brief summary of each theory and its key components, beginning with the Theory of Reasoned Action.

### **2.2.1 Theory of Reasoned Action**

The Theory of Reasoned Action examines factors that influence people's behavior, as well as the connections between behavior and beliefs. Icek Ajzen (2012) claims that changing people's beliefs will result in a shift in their intentions and actions.

Cultural, social, personal, and psychological factors play a key role as a consumer makes purchasing decisions. As a consumer becomes aware of internal and external factors involved in the buying process, their individual behaviors are changed and can directly impact purchasing trends and the decisions of the individual.

Martin Fishbein and Icek Ajzen (2015) state that

Once a set of beliefs is formed it provides the cognitive foundation from which attitudes, perceived norms, and perceptions of control – and ultimately intentions and behaviors – are assumed to follow in a reasonable and consistent fashion . . . As a general rule, people



are likely to engage in careful deliberation when they confront an important decision. (p. 24)

Empirical research found that through the Theory of Reasoned Action framework demographic information such as age, gender, and ethnicity can indirectly influence intentions and behavior. This is important to note due to the number of purchasing decisions that are made by K-12 school administrators. These purchasing decisions can become repetitive in the work of school administrators and ultimately lead school leaders to become complacent during the decision-making process. If purchasing and investment decisions are not viewed as being “important” (as discussed by Fishbein & Ajzen), school administrators can be directly or indirectly influenced through implicit biases of which they are unaware.

### **2.2.2 Principal-Agent Theory**

The Principal-Agent Theory involves a relationship between two or more people known as the principal and the agent. Jensen and Meckling (1976) define an agency relationship “as a contract under which one or more persons [the principal(s)] engage another person [the agent] to perform some service on their behalf which involves delegating some decision making authority to the agent” (p. 308). It is imperative to understand that if both the principal and the agent are attempting to maximize their profit, Jensen and Meckling (1976) emphasize that “the agent will not always act in the best interests of the principal” (p. 308). The concept of residual loss will also be at play where the Principal-Agent Theory exists. Encyclopedia Britannica (n.d.) states that residual loss “occurs whenever the actions that would promote the self-interest of the principal differ from those that would promote the self-interest of the agent, despite monitoring and bonding activities.” For example, when a consumer [principal] is in the market of purchasing a new car,

their interests may include purchasing the highest quality product for the lowest price. However, the car salesperson's [agent] interest may include selling the car for the highest price in order to maximize their financial gain.

### **2.2.3 Motivation-Need Theory**

Motivation-Need Theory relates to Maslow's Hierarchy of Needs. Maslow (1943) asserts that human needs are hierarchical and include physiological, safety, belongingness, esteem, and self-actualization. Consumers are influenced by their interpretation of what goods and/or services are necessary in supporting their well-being or individual needs. Seeley (1992) makes an interesting claim that "the satisfaction of certain needs monopolizes the individual's attention . . . Needs arise as motivators, become satisfied, and are replaced by new needs" (p. 307). An understanding of how an individual's needs influence purchasing decisions and the cyclical nature of the replacement of one's needs can benefit buyers, as they navigate the consumer market. For example, when a consumer purchases a good or service, they have the option to choose between generic or specific products. Raaij and Wandwossen (1978) claim motivational models, such as those found within Motivation-Need Theory are useful when analyzing generic products.

As school administrators make investment decisions on behalf of the educational systems in which they work, it is vital that they are aware of the Motivation-Needs and potential biases that can impact their decisions. By bringing awareness to school administrators, they will less likely be influenced by their biases and interpretations of what are "needs."

#### **2.2.4 Hawkins Stern Impulse Buying Theory**

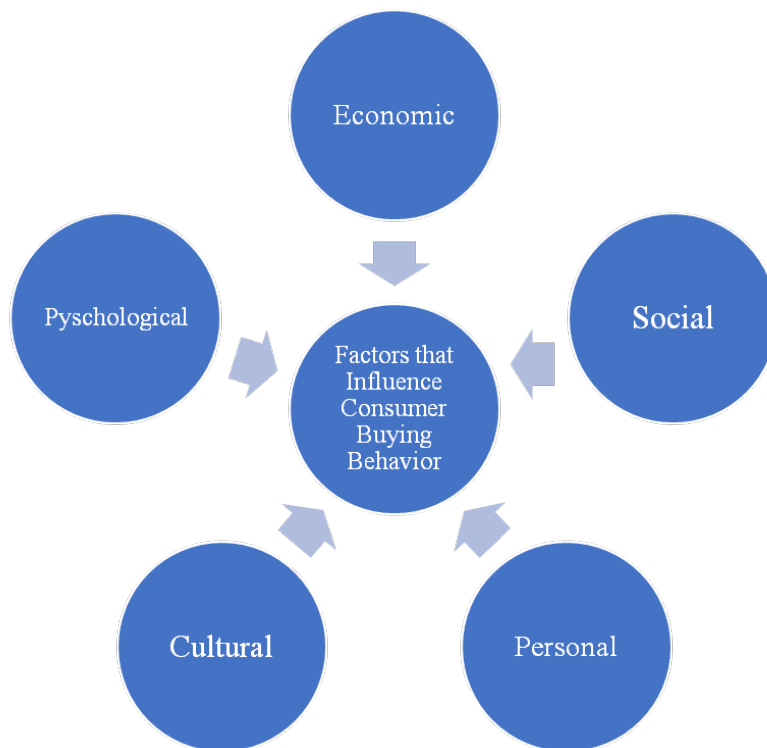
The Hawkins Stern Impulse Buying Theory focuses on the elements related to impulse purchases. Hawkins Stern (1962) categorizes impulse buying in four ways, which include pure impulse buying, reminder impulse buying, suggestion impulse buying, and planned impulse buying.

Impulse buying theory can equate with ill-advised and spontaneous purchasing decisions that do not follow rational thought processes. Impulse purchases occur because products and/or services are easily available to consumers, and marketing strategies effectively target consumers to make impulse purchases.

Impulse buying factors vary, not only among different individuals, but also among the same individual under different buying conditions. These influences include time, location, personality, economic, and cultural factors (Stern, 1962). The complexity of these factors can make it challenging to recognize when a consumer is being influenced to make impulse purchases. Marketers attempt to create easily accessible and attractive conditions to increase sales and lure consumers to purchase their product. Stern (1962) claims that when buying conditions are easy there is a greater likelihood that impulse purchases will occur. Rook asserts that “impulse buying is prone to occur with diminished regard for its consequences” (1987, p. 191). It is important for consumers to be aware of marketing strategies that create environments where impulse buying is likely to occur, as well as the consequences of impulse buying.

Impulse buying tendencies fall on a low-to-high frequency spectrum; these tendencies (see Figure 1) depend on factors previously discussed (i.e., cultural, economic, personal, psychological, and social). Rook and Fisher (1995) define buying impulsiveness as “a consumer’s tendency to buy spontaneously, unreflectively, immediately, and kinetically . . . various factors may intervene

between the impetus and the action” (p. 306). They propose that “one likely intervening factor arises from consumers’ subjective, normative evaluations of acting on their buying impulses” (Rook & Fisher, 1995, p. 306). Impulse buying behaviors occur across all markets; they impact purchases in brick-and-mortar markets, as well as online markets. Yi-Shih, Lin, and Hsu (2016) claim “online impulse buying is a manifestation of consumers’ failure to control shopping impulses when encountering consumptive stimuli” (p. 759).



**Figure 1. Factors Influencing Consumer Buying Behavior**

### **2.3 Private Consumption versus Public Investment**

As school administrators are tasked with making decisions regarding the allocation of school funds, it is imperative that they have an understanding of foundational economic theory specifically related to consumer buying behaviors. Specifically, they must recognize that the fiscal decisions they make may be vulnerable to personal consumer buying influences. Moreover, they need to understand that these are not personal decisions but instead public investments.

While resources are limited, school administrators are looked upon to make the best investment decisions on behalf of their school systems. This dissertation brings awareness to school administrators involving economic theories related to consumer buying behaviors (i.e., private consumption) and further urges them to recognize factors that may influence their investment decisions. By recognizing the importance of aligning investments to the vision and strategic plan of the school district, and understanding the role of the school administrator as a public agent (i.e., public investment), school administrators will be better equipped to distinguish between private consumption and public investment in educational systems. Crompton et al. (2015) assert, “We are convinced that schools – through their leaders – must communicate strategic plans and clear budget goals and processes to stakeholders or risk losing their support” (p. 14). Furthermore, transparency and integrity are vital when communicating the investment decisions of educational systems. This ensures effective communication amongst all stakeholders and promotes a clear understanding of where and why public funds are being spent. The following section reveals what we currently know about school administrators’ buying practices.

## 2.4 Buying Practices of K-12 Public School Administrators

A review of the literature revealed minimal information connecting economic consumer buying behaviors to K-12 educational systems. The databases used for the search included Oxford University Research Archive, EBSCO, and the University of Pittsburgh Library System. The keywords and dates used throughout the searches included “consumer buying behavior,” “economic theory,” “K-12 education,” and “school leaders” between the years 1950 and 2019.

An analysis of educational leadership standards for school leadership preparation programs at the national and state level in the US revealed the following. National Policy Board for Educational Administration (NPBEA) compiles Professional Standards for Educational Leaders, which are guiding practices for school leaders. The Professional Standards for Educational Leaders (2015) include:

### Standard 9: Operations and Management

- Effective educational leaders manage school operations and resources to promote each student’s academic success and well-being.
  - Effective leaders will:
    - Seek, acquire, and manage fiscal, physical, and other resources to support curriculum, instruction, and assessment; student learning community professional capacity and community; and family and community engagement.
    - Are responsible, ethical, and accountable stewards of the school’s monetary and non-monetary resources, engaging in effective budgeting and accounting practices.

Pennsylvania's Framework for Principal Preparation (2008) presents both core and corollary leadership standards. One corollary standard emphasizes the importance of "managing resources for effective results."

One of the required areas for earning a principal certification includes finance and fiscal decision-making. However, no background knowledge in or exposure to economics is needed to receive a K-12 principal certification. It is important to note the differences between economics and finance. As previously mentioned, Merriam-Webster (n.d.-a) defines economics as "a social science concerned chiefly with description and analysis of the production, distribution, and consumption of goods and services." Merriam-Webster (n.d.-b) defines finance as "the science or study of the management of funds." Consequently, purchasing and investment decisions made by school administrators may not align with the school district's mission, vision, and strategic plan. This causes concern, as the investment decisions made by school administrators should be aligned with the vision of the school system. Nevertheless, neither the national nor the Pennsylvania state standards mention school leaders' understanding of economics, buying behavior models, or the factors that influence decisions in educational systems. While school administrators face considerable pressure to be fiscally responsible in a system where resources are finite, they may not know what influences their buying behavior. Lacking this understanding, school administrators may inadvertently make purchases for reasons that do not reflect sound fiscal judgment.

## **2.5 Implications for Future Research**

The exploration of K-12 school administrators' buying behaviors and their ability to recognize factors that influence their investment decisions will be the focus of the study. To explore these behaviors and influences, the study will consist of a workshop intervention and multiple assessments of participants' knowledge and performance on case studies. Outcomes could support a need for professional development. Subsequently, additional supports for school administrators regarding sound fiscal decision-making and addressing the misconception between private consumption and public investment practices could be established.



### **3.0 Methods**

The purpose of this study is four-fold: (a) gain an understanding of K-12 school administrators' literacy regarding key terms related to purchasing/investment in school systems and foundational economic theories related to consumer buying behaviors; (b) determine the awareness school leaders have regarding factors that impact their purchasing and investment decisions; (c) help administrators distinguish between consumption and investment practices in K-12 educational systems; and (d) determine if a workshop can enable school administrators to apply economic concepts to investment decisions made in simulated cases. The inquiry questions that guide this study may help colleges and universities in preparing current and future K-12 school administrators as they make purchasing and investment decisions that impact their places of practice.

#### **3.1 Study Context**

This inquiry study is design-based research where the objective is to design a product or process in order to inform. Edelson (2002) argues that “design provides an opportunity to learn unique lessons” (p. 107). These unique lessons create opportunities to view situations and/or concepts through multiple perspectives that the researcher hopes will lead to learning. The goal of the design-based research study is to bring awareness to the impact that influences, such as economic, social, cultural, personal, and psychological factors, can have on the financial decisions made by school administrators.

The study will assess and teach basic knowledge of economic theories and also examine how K-12 administrators apply this knowledge through simulated case studies about purchasing and investment decisions made within educational systems. The case study analyses will provide insight into the level of understanding that school administrators have regarding buying behaviors and factors that may impact their own purchasing decisions. In summary, over the course of the 90-minute workshop intervention, participants will complete a pre-test; participate in the workshop intervention; analyze case studies; and complete a post-test.

### **3.1.1 Research questions**

The following questions will guide the research study:

1. Knowledge Attainment: As a result of the workshop, to what extent do K-12 school administrators learn:
  - 1.1 What is private consumption and public investment?
  - 1.2 How can misconceptions regarding these topics impact school administrators' purchasing decisions?
  - 1.3 What personal biases can influence school administrators' fiscal decisions?
  - 1.4 What strategies can be utilized to ensure sound fiscal decisions are made?
2. When school administrators simulate purchasing situations, do their actions reflect a public investment decision-making process?

### **3.1.2 Setting and participants**

The study took place in a mid-Atlantic university in a school finance course for educational leaders from K-12 school environments. The school administrators are enrolled in a doctoral program offered by the university. These administrators hold purchasing powers in their places of practice. The total number of participants was 11 with every class member participating in the pre-test, the workshop, and the post-test. There was no compensation nor incentives offered to participants of the study and the study excluded school administrators who do not hold purchasing powers.

### **3.1.3 Intervention**

The intervention in this research study consisted of a 90-minute workshop session. The workshop outline appears in Appendix A. During the workshop, the researcher reviewed key terms, foundational economic theories related to consumer buying behaviors, discussed private consumption and public investment, and reviewed factors and influences that may impact purchasing and investment decisions. Participants analyzed various case studies during the workshop intervention. Lastly, the researcher discussed strategies that support sound fiscal decision-making in educational systems.

### **3.2 Data Collection Procedures**

Pre-post test data collected via the online Qualtrics system were used to gather information regarding the knowledge of K-12 school administrators. The pre-tests and post-tests included a matching section and open-ended questions designed to gather information relevant to school administrators' understanding of purchasing and investments made in K-12 educational systems. The pre and post-test questions are found in Appendix B.

The researcher collected individual case study analyses from the participants. This was used to determine if they could apply their knowledge of potential biases impacting their purchasing decisions; if and when they would collaborate with other stakeholders regarding a purchasing decision; and to assess their ability to pose purchase decision process questions through the lens of a public agent. The case studies are shown in Appendix C.

### **3.3 Data Analysis Procedures**

The pre-test and post-test data analysis provided valuable information on the effectiveness of the 90-minute workshop intervention session. The researcher scored each pre-test and post-test question and assigned a score to each item. Data analysis procedures measured the participants' change in knowledge regarding foundational economic theory, consumer buying behaviors, and factors that may influence their purchasing/investment decisions. A paired sample *t*-test analysis based on pre-test and post-test scores determined if participants' knowledge improved. Power analysis is not applicable due to the sample size of this study. [The sample size chosen is based on the number of students in the doctoral course.]

Case studies were hand-scored by the researcher to identify whether participants' analyses reflect public investment decision-making processes. The assessment of the case study exercise also evaluated whether participants are aware of biases that may impact their fiscal decision-making and their ability to act as a public agent overseeing taxpayer dollars in the allocation of school funds. Descriptive statistics were used to represent participants' case study performance. Table 1 depicts the alignment between research questions and pre-post questions, and Table 2 depicts the alignment between research questions and case study questions.

**Table 1. Research Question and Pretest/Posttest Question Alignment**

Research Question	Pre-Post Test Question
1.1 As a result of the workshop, to what extent do K-12 school administrators learn: What is private consumption and public investment?	Explain the difference between private consumption and public investment, with respect to a school leader with purchasing powers.
1.1 As a result of the workshop, to what extent do K-12 school administrators learn: What is private consumption and public investment?	<p>What best describes the purchasing models depicted in the diagrams below:</p> <ul style="list-style-type: none"> <li>• Personal buying model</li> <li>• Mixed buying/investment model</li> <li>• Public investment model</li> </ul>
1.2 As a result of the workshop, to what extent do K-12 school administrators learn: How can misconceptions regarding these topics impact school administrators' purchasing decisions?	Four consumer buyer theories include (1) Theory of Reasoned Action, (2) Motivation-Need Theory, (3) Hawkins Stern Impulse Buying Theory, and (4), Principal-Agent Theory. In your own words, explain how one of these theories can impact the purchasing decisions of a school leader.
1.3 As a result of the workshop, to what extent do K-12 school administrators learn: What personal bias can influence school administrators' fiscal decisions?	
1.4 As a result of the workshop, to what extent do K-12 school administrators learn: What strategies can be utilized to ensure sound fiscal decisions are made?	Name three strategies that can support effective and responsible fiscal decision-making as a school administrator.

**Table 2. Research Questions and Case Study Questions Alignment**

Research Question	Case Study Questions
2. When school administrators simulate purchasing situations, do their actions reflect a public investment decision-making process?	Describe any personal beliefs, experiences, or influences that could bias your decision. Given the demands of your time as a school leader, would you make this decision alone? Yes or no? If no, list whom you would consult and their role. List the questions you would ask yourself as a public agent tasked with deciding whether or not to make this investment.

### **3.4 Ethical Safeguards**

The University of Pittsburgh Human Research Protection Board reviewed and approved this study on January 27, 2020. This study was ruled exempt as a study of educational settings. All participants heard the introductory script prior to beginning the study. Before the study began, each participant was given a code identifier that was confidential. Before completing the pre-test, post-test, and case study analysis, participants entered their unique identifier to allow each of the assessments to be graded and analyzed. All data were collected and stored in the online Qualtrics database system.

## 4.0 Results

This chapter presents the findings of the research study. Specifically, the following questions guided the research study:

- As a result of the workshop, to what extent do K-12 school administrators learn:
  - What is private consumption and public investment?
  - How can misconceptions regarding these topics impact school administrators' purchasing decisions?
  - What personal biases can influence school administrators' fiscal decisions?
  - What strategies can be utilized to ensure sound fiscal decisions are made?
- When school administrators simulate purchasing situations, do their actions reflect a public investment decision-making process?

The purpose of this study was to investigate whether school administrators could improve their knowledge of private consumption and public investment, in addition to key terms associated with these concepts, through a workshop session. The study also assessed the extent of their background knowledge or experience with economics or consumer buying theories. A total of eleven school administrators took a pre- and post-test before and after the workshop session. The data from the pre and post-test surveys were extracted from Qualtrics and merged into an SPSS file for quantitative analysis. The analysis and breakdown by question appear in the next section.



#### **4.1 To What Extent Did K-12 School Administrators Learn Key Concepts?**

The range for pre-test scores was 6 to 11 for matching questions (#1-8). The range for post-test scores was 9 to 11. Results for the pre- and post-tests were analyzed with a paired-sample *t*-test, using a Type I error rate of .05. The paired-sample *t*-test showed that post-test scores ( $M=0.94$ ,  $SD=0.07$ ) were significantly higher than pre-test scores ( $M=0.79$ ,  $SD=0.15$ );  $t(10)=3.985$ ,  $p=.003$ . These results suggest that school administrators' knowledge of key terms increased after attending a 90-minute workshop on those concepts.

#### **4.2 To What Extent Did K-12 School Administrators Understand Purchasing Decisions?**

A paired-sample *t*-test was also conducted for each of the three open-ended questions in these tests. For Question 10 involving economic consumer buying theories and how these theories can impact purchasing decisions of school administrators, the post-test scores ( $M=.72$ ,  $SD=.46$ ) were significantly higher than pre-test scores ( $M=.18$ ,  $SD=.40$ );  $t(10)=3.464$ ,  $p=.006$ .

Paired-sample *t*-tests for Question 9 regarding strategies to support sound fiscal decision-making and Question 11 regarding the difference between private consumption and public investment did not reveal any significant differences. Analysis of Question 9 resulted in post-test scores ( $M=0.72$ ,  $SD=0.46$ ) slightly higher than pre-test scores ( $M=0.45$ ,  $SD=0.52$ );  $t(10)=1.399$ ,  $p=.192$ . Analysis of Question 11 resulted in post-test scores ( $M=0.63$ ,  $SD=0.50$ ) slightly higher than pre-test scores ( $M=0.45$ ,  $SD=0.52$ );  $t(10)=0.803$ ,  $p=.441$ .

### 4.3 To What Extent Did K-12 School Administrators Identify Purchasing Models?

To recall, these questions asked participants to identify the purchasing model depicted in the diagrams. These questions appear in Appendix B.

Eight participants answered all questions in this section correctly on both the pre-test and the post-test. One participant's scores stayed the same while answering one of the three questions correctly on the pre-test and on the post-test. Therefore, this participant earned 33% on both the pre- and post-test. One participant's score increased from 33% to 100%. Lastly, one participant's score decreased from 100% to 33%. The paired-sample *t*-test showed that post-test scores ( $M=0.88$ ,  $SD=0.27$ ) were the same as the pre-test scores ( $M=0.88$ ,  $SD=0.27$ );  $t(10)=0$ ,  $p=1$ . Therefore, the paired-sample *t*-test for these three questions taken together show that the results stayed the same. These results suggest that school administrators' ability to accurately identify purchasing models overall showed no change, primarily because they understood this concept on the pre-test.

The paired-sample *t*-test results for each multiple-choice question identifying purchasing models are as follows (with 1= correct and 0 = incorrect).

Question 12 post-test scores ( $M=1$ ,  $SD=0$ ) were slightly higher than pre-test scores ( $M=0.81$ ,  $SD=0.4$ );  $t(10)=1.491$ ,  $p=.167$  but no significant changes were found. Question 13 post-test scores ( $M=.81$ ,  $SD=0.4$ ) were slightly lower than pre-test scores ( $M=1$ ,  $SD=0$ );  $t(10)=-1.491$ ,  $p=.167$  but no significant changes were found. Question 14 post-test scores ( $M=0.81$ ,  $SD=0.4$ ) were the same as pre-test scores ( $M=0.81$ ,  $SD=0.4$ );  $t(10)=0$ ,  $p=.1$ ; therefore, no changes were found.

#### **4.4 Will K-12 Administrators Apply Concepts of Private Consumption Versus Public Investment to Their Practice?**

Analysis of the case study responses provided insight to the question regarding school administrators' ability to apply knowledge of public investment constructs into their fiscal decision-making. Following the 90-minute workshop session, participants were asked to analyze two case studies (shown in Appendix C) and to answer the following:

- Describe any personal beliefs, experiences, or influences that could bias your decision.
- Given the demands of your time as a school leader, would you make this decision alone? Yes or no? If no, list whom you would consult and their role.
- List the questions you would ask yourself as a public agent tasked with deciding whether or not to make this investment.

Because these are qualitative answers, I created a matrix to analyze the responses. Overall, the case study analysis indicates that these K-12 administrators used knowledge from the workshop in this simulated exercise. For example, in response to the Case Study A question, "Describe any personal beliefs, experiences, or influences that could bias your decision [to adopt *Scholastic News*]", participants' answers are reflected in Table 3.

**Table 3. Case Study A (Scholastic News)**

Pseudonym	Beliefs	Experiences	Influences
Alaska	When I conduct observations, do I see it used? May not appeal to the interest of the population I serve.	N/A	N/A
California	Who is using and why; waste – 1/3 of classroom	N/A	New reading initiative conflict
Florida	N/A	Scholastic News has been used traditionally at my school.	N/A
Michigan	N/A	If you have used Scholastic News before	N/A
New Hampshire	The background of the principal – did he/she use them? Cost?	N/A	N/A
Pennsylvania	N/A	I know there are free resources online, and I know that teachers don't always use this.	N/A
South Carolina	N/A	N/A	Culture of school, culture of community, personal want to “build trust and rapport,” PTA, supervisors/colleagues
Texas	N/A	Own experience with Scholastic	Previous teaching content; whether or not I am a parent who would like the resource; relationship with teachers who like/dislike the resource

Table 3 (continued)

Vermont	N/A	Social Studies background which lends me to want students to be up-to-date with current affairs; I remember the magazines as a kid in school	Desire for students to read non-fiction sources
Virginia	N/A	I have personally used Scholastic News, including the online component. When used effectively, the students enjoy it and it does enhance literacy instruction. I have also seen it pile up in garbage cans unused and wasted.	N/A
Washington	Past experience with the resource of the company that sells it	N/A	N/A

With respect to the prompt, [“Given the demands of your time as a school leader, would you make this decision alone (to adopt *Scholastic News*)? Yes or no? If no, list whom you would consult and their role”], all participants indicated they would collaborate with stakeholders when making this decision. The list below indicates the stakeholders that participants stated they would collaborate with:

- Curriculum Director
- Business Manager
- Elementary Principals/Assistant Principals
- Teacher Leaders/Grade Level Representatives/Department Chairs/Literacy Coaches
- PTA
- Students

This illustrates that participants would collaborate with a variety of stakeholder groups. Several participants indicated they would form a committee to discuss this in further detail before determining most appropriate next steps.

As for the prompt, [“List the questions you would ask yourself as a public agent tasked with deciding whether or not to make this investment”], participants acknowledged a variety of questions to ask. Their questions are listed below:

- Do teachers see the value of this supplement? How do you know?
- Why are teachers not using *Scholastic News*?
- How many teachers use it weekly?
- Is it culturally relevant?
- Is this resource worth the increase in price? What is the cost per pupil?

- What does this resource align to? Does it align with district approved curriculum?  
To what extend does this resource further goals/mission/strategic plan?
- How do you use the resource for assessment?
- Is this resource the best for student learning? How is this resource enhancing learning? How can that be proven? How do you build it into instruction? Does it benefit student literacy?
- Does everyone need to supplement curriculum with this resource or just some teachers?
- If not renewed, who would be upset? What would be missed?
- Have you looked for other resources?
- What population is benefitting from this?

Several themes surfaced during the analysis of these responses. They include gaining perspective from teachers regarding the value of the resource, calculating the cost of the resource in different ways (i.e., cost per pupil, annual cost, increase of cost over time), analyzing what other resources are available, determining the cultural relevance of the resource, examining how the resource aligns to curriculum/mission/strategic plan/budget, and exploring how the resource is built into instruction and assessment. These questions support the notion that participants are analyzing the simulated case through the lens of a public agent.

We will now transition into the results of Case Study B Participants' answers to the first question [need for mental health education to occur during health education classes] appear in Table 4. Three of the eleven participants did not answer this question. They did answer the other questions in this case study.

**Table 4. Case Study B (Physical Education and Mental Health Initiatives)**

Pseudonym	Beliefs	Experiences	Influences
Alaska	If you feel passionately about recess and/or mental health	N/A	N/A
California	N/A	N/A	Look into what peers in neighboring districts are doing – yoga in schools, etc. Master schedule
Florida	Not answered	N/A	N/A
Michigan	Passion toward physical fitness	Personal knowledge of mental health concerns	N/A
New Hampshire	N/A	Did the principal like gym class when he/she was in school? Do most behaviors come from recess?	Are the parents who are complaining the principal's allies?
Pennsylvania	I know a health bid is well rounded both physically and mentally. I also would be skeptical of research they claim to know.	N/A	N/A
South Carolina	Not answered	N/A	N/A



Table 4 (continued)

Texas	Personal/religious beliefs about mental health	Background in student services (e.g., counselor), experiences with mental health issues (personal or professional), relationships with families, history as an athlete	N/A
Vermont	N/A	Experiences with athletics and/or mental health issues (personal or family)	Age and gender; positionality within the district (I am the Health and Physical Education cooperating principal).
Virginia	Not everyone participates in recess/physical activity breaks	N/A	N/A
Washington	Not answered	N/A	N/A

With respect to the second prompt, all participants indicated they would collaborate with stakeholders when making this decision. These stakeholders are listed below:

- Curriculum Director
- Director of Pupil Services
- Principals/Assistant Principals
- Teacher Leaders/Department Chairs
- School Counselors/Social Workers/Service Providers/Mental Health Professionals
- Research Experts
- PTA/Parents/Guardians
- Students
- Peers in Other Districts
- Cohort Ed.D.

This shows that participants would collaborate with various stakeholder groups when making the decision about how to proceed.

As for prompt 3 [“List the questions you would ask yourself as a public agent tasked with deciding whether or not to make this investment”], participants acknowledged a variety of questions to ask. These questions are listed below:

- What would be in the best interest of our students? What would help them in the future?
- Can this be done with mindfulness in the classroom? Speakers in assemblies?
- What is the rate of students benefitting from mental health education?
- Is there time?
- What would the education look like?

- What gains will come from mental health education and how will it be measured?
- How much recess/PE time will be sacrificed?
- Who will track the mental health curriculum?
- Will it be taught with fidelity and achieve the intended goals?
- Is the mental health training research-based?
- Is there a reasonable compromise of both physical and mental health promotion?
- What families are asking for this? What do they have to gain?
- What scholarly research supports the statements?
- What benefit is there to reduce PE?
- What benefit is there to increase mental health education?
- What data is there regarding self-harm and how it is linked to lack of education?
- What cost is associated with mental health training/who can provide the training?
- How will offering PE/MH/both provide long-term benefit to students?
- What are the tradeoffs between each option?
- Is there already an avenue to provide this information (e.g., counseling curriculum, lessons)?
- What resources would be needed/the cost of those resources?
- Is this decision based on need of students, mission, vision, values of the district, or my own personal influences?
- What benefits do we see with our current setup?
- What resources already exist for other issues (e.g., mental health, PE)?
- What issues are we trying to fix? What evidence within the context suggests a problem exists that this intervention would address?

- What might happen if we don't offer mental health training – liability?
- Risk?
- How would it look if we choose not to offer mental health and a student is harmed as a result? News headlines?
- What liability is really at stake by reducing physical activity versus not offering mental health programming?
- Cost benefit ratio?
- Overall impact good and bad?
- Alternative options?

Themes found during this analysis include the benefits associated with the options presented, any potential liability associated with the decision, the cost/time associated with implementation, the research or evidence supporting physical education and mental health initiatives, and if these initiatives can be supported through resources currently available in the school district. The questions posed by the participants indicate they are analyzing the simulated case through the lens of a public agent.

#### **4.5 What Suggestions Do Participants Have to Improve the Workshop Session?**

Table 5 shows feedback from participants on ways to improve the workshop session. After studying the feedback, the researcher added implications for future trainings and workshops.

**Table 5. K-12 School Administrators' Suggestions for Ways to Improve Workshop**

Post-Test Question #15: What changes do you suggest to improve the workshop?	Implications for Future Trainings/Workshops
The workshop was extremely informative. I never thought of buying power quite like this.	N/A
More examples before the case study that are written down.	Extend the time of the workshop
Would love to hear more about the models in questions 12-14. Great workshop and really well-written case studies.	Add slides to dive deeper into the investment models
I think the workshop was very well organized and thought out.	N/A
Nothing, I think you did a great job. You made clear that the purpose is not to eliminate the effects/bias that you bring as an individual but to be aware of how it may inhibit your ability to make the best decision for public. It was a quick crash course that helped bring some thinking process to the decisions we make with respect to resource allocation.	Extend the workshop so that it does not feel like a "quick crash course."
The budget is built and aligned to strategic plan and mission. That should be the Bible for building administrators to refer to before any purchasing is made. There is no room for private consumption with conversations about public monies.	N/A
Discuss the case studies to see the participants' views.	Extend the time of the workshop. Allow the participants to have an open discussion about each case study.
This was fantastic, thank you! Perhaps adding your examples to the slides would be helpful (I am a note taker:) ) Good luck!	Modify presentation slides and extend the time of the workshop. Specifically, add slides for each of the "real-world" examples that were addressed in the presentation.

*Note.* Eight of the eleven participants responded to this question

## 5.0 Discussion

This study attempted to merge the worlds of K-12 public education and economics. The research focuses on a school administrator's knowledge of economics and their ability to apply economic concepts to their practice, specifically investment/purchasing decisions in K-12 educational environments. Some of these decisions include the responsibility of (a) ensuring that all students' needs are met, (b) managing both internal and external competing initiatives and priorities, and (c) prioritizing where school district funds should be allocated. School leaders are expected to make sound fiscal decisions that will benefit their students and school communities and are expected to do so while balancing complex responsibilities. This study shows that school leaders have minimal exposure to and understanding of factors and biases that may influence their fiscal decisions.

While school administrator certification programs address these examples, there are no national or Pennsylvania state standards involving economics and consumption/investment theories and practices. Deciding where money is spent within a school system is complex and can have a lasting impact, yet Pennsylvania does not require aspiring principals to study the effects of their purchasing decisions.

Prasad and Jha (2014) state, "The majority of decisions taken by a consumer relate to what he buys (products and services), how much he buys (quantity), where he buys (place), when he buys (time) and how he buys (payment terms)" (p. 335). By analyzing what school administrators know about potential factors that could influence their purchasing/investment decisions, we may be able to design workshops and other resources for education decision makers about economics and equip our school systems to better serve the needs of their students and staff. In order to ensure

that purchase decisions are made equitably, and that their actions represent that of a public agent, school administrators need to have a working knowledge of factors and influences that may impact their purchasing decisions.

### **5.1 School Administrators' Literacy Regarding Key Terms**

The first research question investigated K-12 school administrators' literacy regarding key terms related to purchasing/investment in school systems and foundational economic theories of consumer buying behaviors. Participants' initial knowledge about these terms and concepts varied significantly and no participants answered all pre-tests answers correctly. It is important to note that all participants' knowledge increased after the workshop session as evidenced by the improvements in participants' pre-and post- test scores. The three terms that were most frequently missed on the pre-test were *economics*, *investment*, and *public investment*. This revelation reinforces the need to incorporate these key terms and concepts into educational training programs and school district professional development agendas.

### **5.2 Identification of Factors and Biases that can Impact Purchasing/Investment Decisions**

The next research question was used to determine the level of awareness school leaders have regarding factors and biases that can impact their purchasing and investment decisions. Participants successfully noted strategies to support effective and responsible fiscal decision-

making. However, they were not necessarily effective in applying the strategies through the case study analysis.

According to the Pew Research Center (2018), “It is important to consider whether certain words may be viewed as biased or potentially offensive to some respondents, as well as the emotional reaction that some words may provoke.” The researcher noticed that participants’ responses to the case study analyses evoked somewhat personal responses to several questions. Responses to Case Study A (*Adopting Scholastic News*) and Case Study B (*Physical Education and Mental Health Initiatives*), which are shown in Appendix C, provided insight to the ways that participants navigate purchasing/investment decisions. While reading these responses, it was evident that Case Study B elicited emotions, and that participants personalized their actions (i.e., acting as a private consumer). It appears that as the investment decisions became more complex and involved polarizing opinions, participants were affected by personal biases and influences. They communicated various beliefs regarding the most appropriate way to respond. The researcher observed participants acting as a public agent through the first case study analysis. However, results from the second case study represented concepts associated with private consumption. This suggests that participants personalized the purchasing/investment decisions based on their personal beliefs, experiences, and influences. In short, they were acting as personal consumers as opposed to public agents. The researcher is interested in gathering additional information regarding this concept. For example, how would school leaders reflect upon the differences between their decision-making process between Case Study A and Case Study B? These case studies provided “guardrails” for the participants of the study to work within throughout their decision-making process. What would occur if these were removed and school administrators were given no restrictions and guidelines? When school administrators are making



financial decisions within their systems, how much personal thinking, or how many consumer buying behaviors, are influencing their spending?

### **5.3 Distinguishing Between Consumption and Investment Practices Models**

The final research question investigated whether school administrators can look at purchasing models and distinguish between consumption and investment practices in K-12 educational systems. There were no significant changes to participants' knowledge of accurately identifying purchasing models from the pre-test to the post-test. Interestingly, this information is vital in ensuring that school administrators and staff members with purchasing powers are aware of the explicit and implicit biases that may impact their decisions. Without a deep understanding of consumption and investment practices and models, purchases have the likelihood of being made as a private consumer as opposed to a public investor. It is alarming that school administrators holding purchasing powers and overseeing large sums of school funds are not trained and educated to recognize the difference between personal consumption purchasing models and private investment purchasing models. The researcher urges school systems and educational institutions to recognize the high risk associated with this lack of knowledge and to actively pursue addressing these issues.

## 5.4 Limitations

Like all research, this study had its limitations. Most importantly, readers should use caution when trying to generalize the results of this study to other contexts. This is due to the particular setting for the research and the small sample size. It is important to note that this study's findings can only represent the backgrounds, knowledge, and literacy of the 11 participants. Future investigations should include a larger sample size and to incorporate a sample that represents numerous and diverse educational environments. These could include public and private settings with urban, suburban, and rural contexts. The researcher did not collect demographic information from the participants, nor did the researcher gather data on the participants' work environments, their backgrounds, or experiences. The researcher also did not collect participants' data regarding their teaching background, positions they have held in K-12 school systems, and their experiences in the field of economics.

Another limitation of the study was the length of the workshop session. The researcher was not able to provide an opportunity for discussion and collaboration between participants due to time constraints outside of the researcher's control.

The search for literature did not reveal any research involving purchasing/investment decision-making in K-12 education. Therefore, the literature review for this study relied entirely on research completed outside the field of education.

Lastly, it is important to note that in Case Study B, three of the 11 participants did not answer Question 1. The investigator believes this is due to the layout of the case study worksheets. In order to address this in future sessions, the researcher plans to edit the layout of the worksheets and will review the analysis questions with participants after they complete the worksheet.

The next sections provide information on how similar studies can be improved in the future. They will also show how schools and educational programs can apply what was learned through this study to help educators with purchasing powers to act through the lens of a public agent.

### **5.5 Implications for Future Research**

The literature review found no educational research studies on the topics in this paper. Therefore, additional research should be done. Studies should include all stakeholders responsible for making purchasing decisions within their educational systems, including school board members, principals, and other school district staff members. The research questions should seek to determine exactly what process stakeholders use when making purchasing/investment decisions. It is important to know who is involved in this process and whether the school district can collaborate with economics experts to support stakeholders to make more appropriate purchasing/investment decisions.

The two most frequent and significant suggestions shared by participants to improve future workshop sessions are (a) extending the length of the workshop and (b) modifying the presentation to delve deeper into additional real-world examples and case study analysis. Future research should consider these changes in the intervention.

## 5.6 Implications for Practice

The investigator conducted a pilot workshop prior to the research study. This provided an opportunity for the researcher to modify the workshop session and assessment tools. Mertens (2010) suggests, “Pilot testing a survey is a critical part of ensuring quality that researchers can use to determine the quality of questions as well as the need for modifications in the implementation of the survey” (p. 215). The pilot also gauged the experience and background that aspiring principals in the state of Pennsylvania had in relation to the topics covered in the research study. That exercise also revealed educators’ lack of knowledge and experience with economic concepts regarding private consumption versus public investment.

Therefore, the researcher encourages educational training programs and school districts to provide this training/workshop session in the future. Certification standards at both the national and state level should require candidates to have some expertise in economics, specifically as it relates to private consumption and public investment. These standards should explicitly address theories on consumer buying behaviors; what public investment is; how to identify influences and biases that could impact fiscal decision-making; and the importance of acting responsibly as a public agent.

The researcher encourages staff members with purchasing powers to attend workshop sessions to improve their understanding and knowledge of concepts presented in this study. This training can target curriculum directors, pupil service staff members, department chairs, facilities managers, food service directors, and others. The goal is to increase knowledge within all stakeholder groups that hold purchasing powers within educational systems regarding potential bias that can impact their individual and collective fiscal decisions. Viewing purchasing/investment decisions through the lens of a public agent acting in the best interest of

their constituents will maximize their ability to make sound fiscal decisions. Another suggestion is for school districts to require that staff members with purchasing powers to submit spending justifications to their business office for approval to prevent school leaders from making decisions merely for personal reasons. This policy will support building the capacity of school administrators to recognize the influences that may impact their fiscal decisions and create a system where school funds are spent more appropriately.

### **5.7 Implications for Higher Education**

The implications for higher education involve systemic changes that would need to be outlined and addressed in policy. The researcher encourages educational institutes that train and prepare teachers, principals, and other school district staff members to require programs to cover the concepts of private consumption and public investment. One recommendation is to update the curriculum to incorporate coursework in the field of economics. Successful completion of the coursework should be a requirement for future teachers, principals, superintendents, and all staff members of K-12 public education. Educational preparation programs may not have an economist on staff. In that case, it is recommended that program administrators consult an economist when establishing their training programs, to ensure that these topics are adequately addressed. The purpose of this change is to ensure that public agents with purchasing powers act with fidelity and expertise while navigating some of their most challenging decisions as school administrators. It is imperative that institutions of higher education recognize the gap in knowledge that our school leaders possess regarding buying behaviors, specifically related to private consumption and public

investment. The return on investment that school districts will experience when their fiscal decision-makers have a solid understanding and knowledge of these concepts will be significant.

### **5.8 Note to the Reader**

The study concluded during the COVID-19 worldwide pandemic in 2020. The researcher finds relevant and timely implications related to this research. The researcher, as well as a significant number of colleagues, received a high volume of product and services marketing emails, phone calls, and other communication from various companies during the COVID-19 shutdown of public schools. School leaders were inundated with marketing attempts to promote online resources for remote learning; virtual graduation and prom services; ways to incorporate the signing of virtual yearbooks; platforms to collaborate with colleagues, students, and families; and various other products and services. These are concrete examples of why school administrators must be aware of such marketing strategies and tactics.

### **5.9 Conclusion**

The roles and responsibilities of school administrators and educators are complex and directly align with the overall effectiveness of the school system. Investment and purchasing decisions have lasting impacts on educational systems and can be detrimental to the overall growth and success of the organization. There currently are no regulations for schools to educate those with purchasing powers to ensure they act through the lens of a public agent, not a private

consumer. Why over the last few decades in education has it been acceptable to make purchasing decisions based on the notion of “If we don’t spend it, we lose it” or “This is how it’s always been done”? School districts need to recognize the significant risk associated with school administrators’ purchasing/investing decisions. Staff members with purchasing powers are obligated to act as public agents (i.e., act in the best interest of our school communities) and to ensure this is done with fidelity, staff members with purchasing/investment powers need to have a strong understanding of economics, private consumption, and public investment.

As the purchasing/investment simulations became more complex, responses from the participants moved between private consumption and public investment ideals. By bringing awareness and knowledge to school administrators and districts regarding the concepts of private consumption and public investment, school districts will be better equipped to allocate school funds (i.e., public monies) effectively and responsibly.

In conclusion, marketers work to create systems where consumers and investors believe their product and/or service is needed to effectively address a problem. This is why all school administrators and staff members with purchasing powers must be cognizant of the various consumer economic theories as well as marketing strategies used to promote products and services. Hopefully, this research has provided a first step towards ensuring that goal.

## Appendix A – Workshop Intervention

Study Title:

Private Consumption Versus Public Investment: Buying Behaviors of K-12 School  
Administrators

# Introduction to Buying Behaviors of K-12 School Administrators

Natasha Dirda

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Agenda	Time
Welcome and Introduction	5 minutes
Pre-Test	10 minutes
Overview of Key Terminology	10 minutes
Introduction to Foundational Economic Theory	20 minutes
Private Consumption Vs. Public Investment	10 minutes
Case Studies	30 minutes
Review of Influences and Strategies	15 minutes
Post-Test	15 minutes
Questions and Closure	10 minutes

## Learning Goals

- ▶ To gain a deeper understanding of economics and the ways that educators can be influenced when making purchasing/investment decisions in school systems.
- ▶ To improve school administrators' understanding of private consumption versus public investment.
- ▶ To recognize the factors that influence buying/investment decisions made within K-12 educational systems.

## PA Leadership Standards

**COROLLARY STANDARD TWO: *The leader manages resources for effective results.***

[Major concepts: Results-based fiscal planning, human resource management ]

	<b>Knowledge and Understanding</b>	<b>Competence</b>	<b>Performance/Demonstration</b>	<b>Evidence/Measure</b>
A	Understands wide variety of resources available (time, space, facilities, financial, human, organizational, both internal/external) and how to make informed decisions using appropriate analyses (e.g., cost-benefit)	Able to effectively employ available resources to maximize benefits.	Demonstrates that spending decisions are aligned with the vision, mission and goals of the strategic plan.	1/2/3/5

## Essential Questions

- ▶ What is private consumption and public investment? How can misconceptions regarding these topics impact school administrators?
- ▶ What factors can influence my fiscal decisions as a school administrator?
- ▶ What strategies can be utilized to ensure effective purchasing decisions are made?

## Overview of Key Terminology

- ▶ At your tables, complete the activity regarding key terms and factors that can influence purchasing/investment decisions.

## Introduction to Foundational Economic Theory

- ▶ Let's look at a few examples...



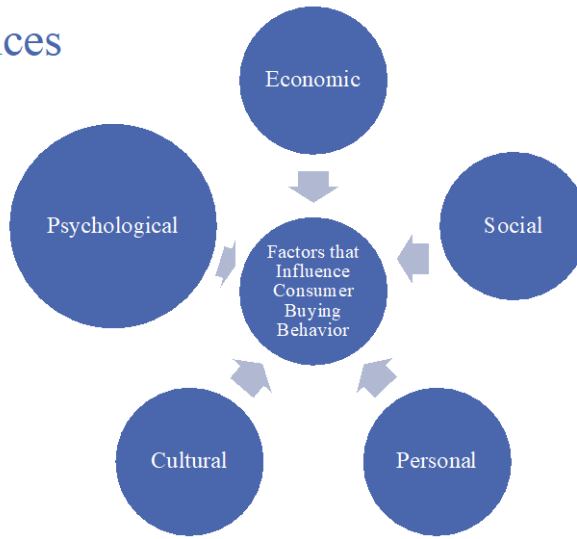
## Four Consumer Buying Theories

- ▶ Theory of Reasoned Action
- ▶ Motivation-Need Theory
- ▶ Hawkins Stern Impulse Buying Theory
- ▶ Principal-Agent Theory

## Case Study Activity

- ▶ Individually, read and analyze the various case studies.
- ▶ Be prepared to share connections to private consumption versus public investment and your findings on influences that impact the school administrator.

## Influences



**Figure:** *Factors Influencing Consumer Buying Behavior*

## Strategies

- ▶ Ensure alignment with district mission, strategic plan, and budget
- ▶ Take your time
- ▶ Collaborate with appropriate stakeholders
- ▶ Identify risks associated with decision

## Closing



## References

- Ajzen, I. (2012). Martin Fishbein's legacy: The reasoned action approach. *The Annals of the American Academy of Political and Social Science*, 640, 11-27. Retrieved from <http://www.jstor.org.pitt.idm.oclc.org/stable/23218420>
- Eisenhardt, K.E. (1989). Agency theory: An assessment and review. *The Academy of Management Review*, 14(2), 57-74.
- Jensen, M. C. & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305-360.
- Raaij, W.F. & Wandwossen, K. (1978). Motivation-need theories and consumer behavior. *Association for Consumer Research*, 5, 590-595.
- Rook, D. W. (1987). The buying impulse. *Journal of Consumer Research*, 14, 189-199.
- Stern, H. (1962). The significance of impulse buying today. *Journal of Marketing*, 26(2), 59-62.

## Appendix B – Pre-Test and Post-Test

### Pre-Test

For questions #1 – 8, please match the term to the correct definition.

- |                                   |   |
|-----------------------------------|---|
| _____ 1. Economics                | A. The amount of money spent.   |
| _____ 2. Marketing                | B. The production, allocation, and consumption of good and services for the satisfaction of human needs and wants.  |
| _____ 3. Consumer Buying Behavior | C. The systematic and comprehensive recording of financial transactions pertaining to a business.   |
| _____ 4. Revenues                 | D. The process or technique of promoting, selling, and distributing a product or service.   |
| _____ 5. Expenditures             | E. A financial gain, especially the difference between the amount earned and the amount spent in buying, operating, or producing something.                                       |
| _____ 6. Products                 | F. Investment in particular assets, with the goal of reciprocating benefits in the future.  |
| _____ 7. Investment               | G. A decision-making process that includes recognition of a need or needs, the search of information, and the evaluation of alternatives prior to a decision to purchase is made. |
| _____ 8. Public Investment        | H. The total income produced by a given source.   |
|                                   | I. The outlay of money usually for income or profit.  |
|                                   | J. An object or system made available for consumer use.   |
|                                   | K. An estimation of expected income and expense for a given period of time.   |

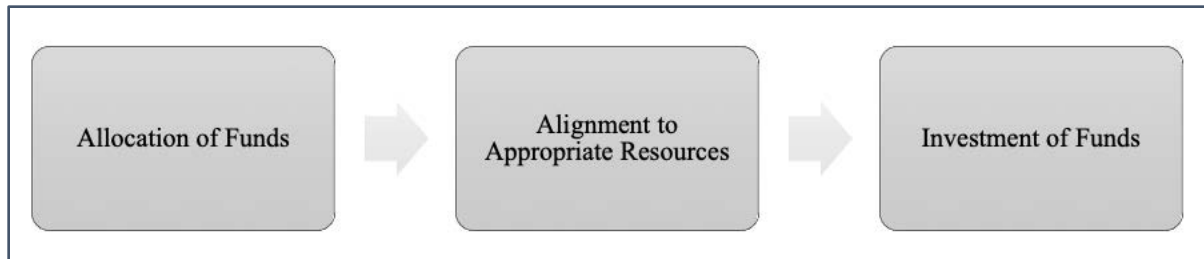
9. Name three strategies that can support effective and responsible fiscal decision-making as a school administrator.

10. Four consumer buyer theories include (1) Theory of Reasoned Action, (2) Motivation-Need Theory, (3) Hawkins Stern Impulse Buying Theory, and (4), Principal-Agent Theory. In your own words, explain how one of these theories can impact the purchasing decisions of a school administrator.

11. Explain the difference between private consumption and public investment, with respect to a school administrator with purchasing powers.

12. What best describes the purchasing models depicted in the diagrams below:

- a. Personal buying model
- b. Mixed buying/investment model
- c. Public investment model





13. What best describes the purchasing models depicted in the diagrams below:
- a. Personal buying model
  - b. Mixed buying/investment model
  - c. Public investment model



14. What best describes the purchasing models depicted in the diagrams below:
- a. Personal buying model
  - b. Mixed buying/investment model
  - c. Public investment model



## Post-Test

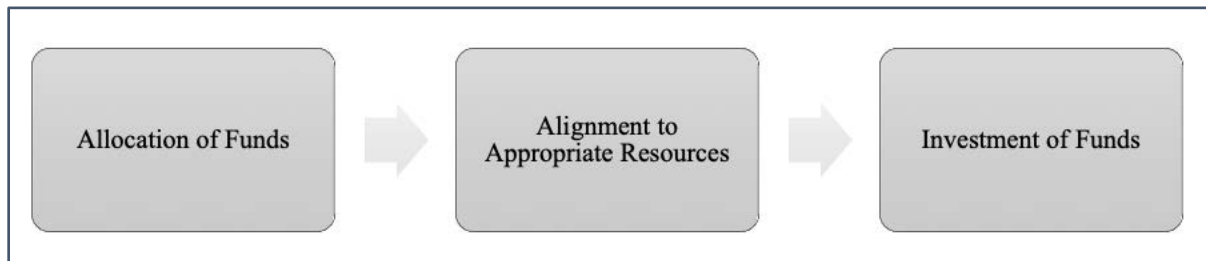
For questions #1 – 8, please match the term to the correct definition.

- |                                   |   |
|-----------------------------------|---|
| _____ 1. Economics                | A. The amount of money spent.   |
| _____ 2. Marketing                | B. The production, allocation, and consumption of good and services for the satisfaction of human needs and wants.  |
| _____ 3. Consumer Buying Behavior | C. The systematic and comprehensive recording of financial transactions pertaining to a business.   |
| _____ 4. Revenues                 | D. The process or technique of promoting, selling, and distributing a product or service.   |
| _____ 5. Expenditures             | E. A financial gain, especially the difference between the amount earned and the amount spent in buying, operating, or producing something.                                       |
| _____ 6. Products                 | F. Investment in particular assets, with the goal of reciprocating benefits in the future.  |
| _____ 7. Investment               | G. A decision-making process that includes recognition of a need or needs, the search of information, and the evaluation of alternatives prior to a decision to purchase is made. |
| _____ 8. Public Investment        | H. The total income produced by a given source.   |
|                                   | I. The outlay of money usually for income or profit.  |
|                                   | J. An object or system made available for consumer use.   |
|                                   | K. An estimation of expected income and expense for a given period of time.   |

9. Name three strategies that can support effective and responsible fiscal decision-making as a school administrator.

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14. What best describes the purchasing models depicted in the diagrams below:

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- b. Mixed buying/investment model
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15. What changes do you suggest to improve the workshop?

## Appendix C – Case Studies

**Study Title:** Private Consumption Versus Public Investment:  
Buying Behaviors of K-12 School Administrators

**Directions:** Read the following case studies and relevant questions and answer each question. Answer them as if you were the school administrator in the case. Upon completion, please submit your analyses to the principal investigator.

### Case Study A: Scholastic News

You were hired only three months ago and are continuing to build trust and rapport with your staff. After school one day, your 3rd grade teachers stop by your office to discuss their *Scholastic News* magazine renewals. One teacher says, “My students and their families are very excited about recent updates to *Scholastic News*. They can access it online, and the families have said that they love being able to speak with their children about this at home.” You are interested in the context and history of this resource being used in your school district and decide to contact your colleagues in that regard.

As you are leaving your office, the head custodian approaches you and asks what you would like for him to do with the unopened *Scholastic News* magazines that he found in trash cans throughout the building. You ask where he found them.

“I have found them unopened and unused,” he says, “in about a third of the classrooms since they started ordering the magazines 10 years ago.”

At your next elementary administrator meeting you ask your colleagues how they feel about *Scholastic News*. One colleague adamantly protests, “We have always provided our teachers and students with this resource. You cannot simply take it away when our staff depends on it to enhance their classroom lessons. Our teachers, students, and families will be furious.” The others agree. After the meeting, however, another colleague phones you to explain that *Scholastic News* does not align with the school district’s new literacy initiative that will be implemented next year.

The following week, you receive a voicemail from the *Scholastic News* representative inquiring about your district’s renewal for the upcoming year. The representative explains that the price of their product is increasing by 15%, due to the new online component. The sales rep says it’s worth it because that will mean improved access for your teachers, students, and families. They also encourage you to renew now, explaining that renewal prices are set to increase by 20% at the end of the week.

1. Describe any personal beliefs, experiences, or influences that could bias your decision.
2. Given the demands of your time as a school leader, would you make this decision alone? Yes or no? If no, list whom you would consult and their role.
3. List the questions you would ask yourself as a public agent tasked with deciding whether or not to make this investment.

### **Case Study B: Physical Education and Mental Health Initiatives**

Your school district is deeply involved in athletics and is highly regarded as a strong and successful sports community. There is a strong tradition of competitive athletic teams and strong community support of physical education.

Recently, however, a number of families have communicated a need for mental health education to occur during health education classes throughout the district. The parents argue that national studies point to increasing need for positive mental health supports. The parents' proposal to add mental health lessons will reduce recess schedules for elementary aged students and the amount of time that middle and high school aged students participate in physical education during the school day.

When a concerned parent heard a neighbor stating that they are going to cut portions of the physical education program they attended the next school board meeting to voice their concerns. At the meeting, the parent voiced that they started a petition to make zero cuts to the program, as the proposed cuts will undermine physical conditioning and have long term effects on the high achievement and longstanding traditions of the athletics teams, which simply cannot happen. "Besides, all research points to the benefits of exercise for one's mental health," they argued.

As a middle school principal, you have experienced a rise in recent mental health concerns of your student body, with several recently documented incidents of self-harm among students. Your high school colleagues have often mentioned similar concerns. The school district can set aside time for mental health educational training or continue to offer recess and physical activity breaks for all students in the district.

1. Describe any personal beliefs, experiences, or influences that could bias your decision.

2. Given the demands of your time as a school leader, would you make this decision alone? Yes or no? If no, list whom you would consult and their role.

3. List the questions you would ask yourself as a public agent tasked with deciding whether or not to make this investment.

## Bibliography

- Adamson, F. (2016). *Privatization or public investment in education?* Stanford Center for Opportunity Policy in Education. Retrieved from <https://edpolicy.stanford.edu/sites/default/files/publications/scope-investment-public-ed-brief-final.pdf>
- Ajzen, I. (2012). Martin Fishbein's legacy: The reasoned action approach. *The Annals of the American Academy of Political and Social Science*, 640, 11–27. Retrieved from <http://www.jstor.org/pitt.idm.oclc.org/stable/23218420>
- Bivens, J. (2012, April 18). *Public investment: The next 'new thing' for powering economic growth.* Economic Policy Institute. Retrieved from <https://www.epi.org/publication/bp338-public-investments/>
- Brooks, C. (2012, June 6). *What is economics?* Business News Daily. Retrieved from <https://www.businessnewsdaily.com/2639-economics.html/>
- Crampton, F. E., Wood, R. C., & Thompson, D. C. (2015). *Money and schools* (6th ed.). New York, NY: Routledge.
- Edelson, D. C. (2002). Design research: What we learn when we engage in design. *Journal of the Learning Sciences*, 11(1), 105–121.
- Encyclopedia Britannica. (n.d.). *Residual loss.* Retrieved from <https://www.britannica.com/topic/residual-loss>
- Fishbein, M., & Ajzen, I. (2015). *Predicting and changing behavior: The reasoned action approach.* New York, NY: Routledge.
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305–360.
- Library of Economics and Liberty. (n.d.). *What is economics?* Retrieved from <https://www.econlib.org/library/Topics/College/whatisseconomics.html>
- Maslow, A. H. (1943). A theory of human motivation. *Psychological Review*, 50(4), 370–396.
- Merriam-Webster. (n.d.-a). *Economics.* Retrieved from <https://www.merriam-webster.com/dictionary/economics>
- Merriam-Webster. (n.d.-b). *Finance.* Retrieved from <https://www.merriam-webster.com/dictionary/finance>



- Merriam-Webster. (n.d.-c). *Investment*. Retrieved from <https://www.merriam-webster.com/dictionary/investment>
- Mertens, D. M. (2010). *Research and evaluation in education and psychology: Integrating diversity with quantitative, qualitative, and mixed methods*. Los Angeles, CA: SAGE Publications Inc.
- National Policy Board for Educational Administration. (2015). *Professional standards for educational leaders: 2015*. Reston, VA: Author.
- Pew Research Center. (2018). *Questionnaire design*. Retrieved from <https://www.pewresearch.org/methods/u-s-survey-research/questionnaire-design/>
- Prasad, R. K., & Jha, M. K. (2014). Consumer buying decisions models: A descriptive study. *International Journal of Innovation and Applied Studies*, 6(3), 335–351.
- Raaij, W. F., & Wandwossen, K. (1978). Motivation-need theories and consumer behavior. *Association for Consumer Research*, 5, 590–595.
- Rook, D. W. (1987). The buying impulse. *Journal of Consumer Research*, 14, 189–199.
- Rook, D. W., & Fisher, R. J. (1995). Normative influences on impulsive buying behavior. *Journal of Consumer Research*, 22, 305–313.
- Seeley, E. (1992). Human needs and consumer economics: The implications of Maslow's theory of motivation for consumer expenditure patterns. *The Journal of Socio-Economics*, 21(4), 303–324.
- Singh, A. (2014). Consumer buying behaviour. *International Research Journal of Management Sociology & Humanity*, 5(12), 17–21.
- Stern, H. (1962). The significance of impulse buying today. *Journal of Marketing*, 26(2), 59–62.
- Yi-Shih, L. L., Lin, S. W., & Hsu, L. Y. (2016). Motivation for online impulse buying: A two-factor theory perspective. *International Journal of Information Management*, 36(151), 759–772.