Opportunities for Augmenting Elder Care Business Models with Digital Solutions

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ABSTRACT

As the population ages and people live longer, the demand for elder care is growing. Families want affordable options that will keep their loved ones safe, healthy, and happy. To this end there are many business opportunities, especially those that use new technology to create innovative solutions for providing consistent, high quality care that's financially efficient for the client and lucrative for the provider. The purpose of this paper is to provide readers with an overview of several current and future business opportunities in elder care.

To determine where these opportunities may lie, the author reviewed and compared data from eight U.S-focused companies to provide an overview of the scope and variation in elder care businesses, with an emphasis on the bottom line. These organizations range from those that provide assisted living options, homecare options, new technology, and a combination of the above. Both challenges and opportunities are discussed. This is designed to provide an introduction to the topic; those who are interested in starting their own elder care business or investing in one are encouraged to pursue more in-depth research. However, those new to the industry will find this is a great place to start and will appreciate the time and effort it will save them in making their initial decisions.

At the end of this study, the author provides his recommendations for elder care investing as well as the model he would develop if he were to start his own business.

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Introduction

Between 2012 and 2050, the elder population in the United States will experience considerable growth. In 2050, the 65-plus population is projected to be 83.7 million, almost double its estimated population of 43.1 million in 2012. In 2012, seniors made up 13.7 percent of the U.S. population. By 2030, that figure will increase to 20.3 percent[1].

Clearly there is a growing demand for elder services in the United States, and opportunities for new businesses that provide them. In order to know where to invest time and resources, it's important to understand what types of new enterprises will be most beneficial to both businesses and the clients, and what types of services will be in highest demand. One challenge is to attract more companies to invest their knowledge and resources in a market that has not, historically, always been profitable.

In an industry as diverse as this one, it's hard to know where the best opportunities lie. There are an extensive number of topics and a massive amount of detail. Where does one start? The first goal is to understand this market – the key players and the dynamics. The second task is to examine business models in the elder care industry that are working well and not so well, ascertain why, and follow a path that utilizes the strengths of existing companies while steering clear of the pitfalls.

This essay examines what is working in various sectors of the elder care business in the U.S. today and which changes make the most sense for the future. The next potentially successful business model will optimize the established elder care business models by adding digital solutions that are based on the technological advances of the last 20 years. In this way the new business will be more efficient, more cost effetive, or offer a unique service in the elder care industry.

This sounds sensible; but when I tried to find business model comparisons to draw from, my research proved difficult. My goal is to make it easier for my audience by at least beginning the work for you. To achieve this, the essay begins by providing a broad perspective of the elder

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[1] Ortman, J.M, Velkoff, V.A., & Hogan, H. (2014, May). *An Aging Nation: The Older Population in the United States* [PDF]. Washington, DC: Current Population Reports.

care industry. Then I explain which eight companies I chose to study and why, followed by an overview on the disadvantages and advantages of each by drawing critical information from my research and Form 10-K reports. I will compare the different businesses, and highlight where I believe promising opportunities lie in the elder care industry. Lastly, I will provide my own recommendations for entrepreneurs who want to start a business in this field.

Before I talk about the structure of the essay, I want to clarify the term "elder care". The term "elder care" is very broad: it is any service provided to elders. An elder, by Cambridge Dictionary's definition is an older person, especially one who deserves respect[2]. In this essay, the term means older person, over 65, partly or fully retired, who may have some health issues. I chose this term because I believe the elder care industry should treat its customers with respectt.

One way to divide the market is by location of care (LOC), which are aging at home(homecare) and aging somewhere else(senior living). Within each, there are different types of services. Therefore, by studying both the homecare and senior living businesses, we will cover the full range of elder care.

When I talk about opportunities within elder care, the range is also extensive. The business may involve anything from designing a computer mouse for people with arthritis to building a new home designed with ramps and lifts. As you can see, there are unlimited opportunities or niche markets within the broad term elder care.

In this essay, I have chosen eight companies to present an overview of the elder care industry. I selected four companies from homecare and senior living businesses that cover a full range of the elder care industry. Then I selected four smaller companies which focus on innovative digital solutions that target a niche market. Creating similar start-ups would require a much lower fixed cost.

The eight companies I chose can be divided into high fixed-cost and low fixed-cost companies. The high fixed-cost solutions are geared to business people that have significant startup capital, while the low fixed-cost solutions are selected for entrepreneurs that have less capital or are interested in developing a software solution for the elder market. Within the high

[2] In *Cambridge Dictionary Online*, Retrieved Apr 24, 2018, from https://dictionary.cambridge.org/us/dictionary/english/elder

fixed-cost companies I selected two companies from homecare, and two from senior living. It is important to note that the current preference is for homecare[3]. This will be discussed further in Part II of this essay.

Within the low fixed-cost companies, I have selected two specific kinds: homecare technology companies and "pet" companies. The reason I chose homecare technology companies is because they support the trend toward homecare and have outstanding venture capital funding prospects. New models tend to inspire people with money lying around. The other reason I chose the homecare technology companies is that they focus on making the original systems more efficient rather than competing with the established business giants such as homecare or senior living companies. In addition these companies also focus on applying new technology to old problems, a growing trend entrepreneurs may leverage to make their businesses both valuable and unique in the marketplace.

The reason I analyzed the two "pet" companies is they may potentially solve a growing problem: there is a shrinking population of family caregivers available to take care of elders, many of whom require monitoring or a safety net but not advanced care[4]. Who is going to do the monitoring? High tech "pets" are a potential solution. PARO, one of the two innovative "pet" companies, focuses on robot pet seals that accompany elders, while CareCoach focuses on digital pets installed on an iPad.

I want to point out that this is not a complete picture of the opportunities within the elder care system, however I believe I've presented a good cross section. While I will provide some numbers and analysis, I will try to strike a balance by providing enough detail and business-related information without burying the reader in unnecessary complexity. I refer the reader to the notes and appendices for more in-depth discussion and detail.

The company names and brief details are summarized below in Table 1.

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[3] Osterman, P. (2017). *Who will care for us? : Long-term care and the long-term workforce, pg.6* New York: Russel Sage Foundation.

[4] Osterman, P. (2017). *Who will care for us? : Long-term care and the long-term workforce, pg.54* New York: Russel Sage Foundation.

Table 1: Company Summary and Industry Description

Company #	Company Name	Industry Sector	Industry Description
1	Almost Family	Homecare	The homecare industry is highly fragmented, with more than 90.0% of industry establishments consisting of sole proprietorships. There are no major players in the market. The largest in the industry are Kindred Healthcare (2.8%), Lincare Holdings (2.3%), and Amedisys (1.6%) respectively. However, the largest company focuses mainly on operating hospitals and nursing centers, while second largest is mainly focused on therapies –neither is the main revenue of the industry. Currently, the largest revenue segments of the industry are home health (56.5%) and hospice (23.2%). Almost Family is an established home health and personal care focused company, while Amedisys is a hospice focused company[5].
2	Amedisys		
3	Brookdale Senior Living(BKD)	Senior Living	The senior living industry is highly fragmented and characterized by numerous local and regional operators. Nonprofit operators account for 42% of industry revenue, but account for only 20% of total facilities in the United States. The largest player in the field is BKD with a revenue market share of 7.6%, followed by FVE with a market share of 2.1% of the total market[6].
4	Five Star Senior (FVE)		

[5] Guattery, M. (2017, August). Home again: Demand for services will stay high but cuts in federal funding threaten profitability [PDF]. Los Angeles: IBISWorld. Inc

[6] Curran, J. (2017, June). Golden years: Aging population, new programs and offerings will benefit the industry [PDF]. Los Angeles: IBISWorld. Inc

5	ClearCare	Homecare Technology	The Homecare Technology sector is a niche sector that consists of companies, mainly startups, that focus on using internet technology to make homecare more efficient. There is no current market research established for this niche sector. The most high-profile businesses include HomeTeam, Honor, HomeHero, and ClearCare.
6	HomeTeam		
7	PARO	"Pets"	The "Pets" niche sector consists of a relatively small number of companies that focus on providing solutions in the form of "pets" to accompany elders at home or in an institutional setting. There is no current market research established for this niche sector. The most widely represented companies in business publications, include PARO, a robotic baby seal company, and CareCoach, a digital pet company.
8	CareCoach		

PART I: Overview of the Elder Care Industry and Sectors I Will Focus On

According to a market research report by BCC Research, the market in the U.S for elder care products and services is expected to increase from $320 billion in 2013 to $436 billion in 2018, representing a five-year compound annual growth rate of 6.4 percent. The market is growing quickly and exponentially with no slowdown in view in the near future[7]. To provide an overview of opportunities, this essay will focus on the following sectors of the elder care system: Homecare, Senior Living, Homecare Technology Solutions, and Pets. In the following paragraphs I provide a brief introduction to these four.

Homecare

Homecare, as the name suggests, refers to care provided to the elderly or disabled in a home setting. Homecare is usually separated into three categories: home health, personal care and hospice. Home health refers to medical services such as recuperative health care and follow-up treatments at home after a patient has been released from the hospital. These services are provided by a certified nurse assistant(CNA). Personal care refers to non-medical services such as feeding, bathing, dressing, fall prevention, medication management, and companionship services usually provided by homecare aides. The personnel who provide these services are custodial rather than skilled, and their time is usually charged on an hourly basis. Hospice provides care and comfort to patients that have life expectancies of six months or less. These patients usually suffer from illnesses such as cancer, pulmonary disease, heart disease, or HIV/AIDS. The homecare sector had a revenue of $92.5 billion in 2017 with an annual growth of 4% between 2012 – 2017, and an expected annual growth rate of 6.1% between 2017 - 2022[8].

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[7] B. (Ed.). (2013, December). The Elder Care Market: Products and Services. Retrieved from https://www.bccresearch.com/pressroom/hlc/US-elder-care-market-grow-$436.6-billion-2018

[8] Guattery, M. (2017, August). Home again: Demand for services will stay high but cuts in federal funding threaten profitability [PDF]. Los Angeles: IBISWorld. Inc

Senior Living

The senior living industry provides residential and personal care services for the elderly and other individuals who are unable to fully care for themselves or who desire to live in a community facility. Residents are classified by the degree of help they need, and facilities are designed for meeting these varied needs. There are usually a few divisions within senior living; Independent living communities are private living communities designed for residents who can live with relatively high degrees of independence. Assisted living communities generally provide more services compared to independent living communities, and are designed for elders with a mid-level of independence. Some assisted living facilities will have memory care centers for patients with Alzheimer's disease, dementia, and other types of memory loss. Skilled nursing facilities, also called SNFs, generally provide extensive healthcare and nursing services for elders who are dependent on others for daily living. Within these facilities are common areas such as libraries, dining rooms, exercise equipment and often onsite conveniences such as banks, hair salons, and small grocery stores. The senior living sector had a revenue of $66.3 billion in 2017 with an annual growth of 3.6% between 2012 – 2017, and an expected annual growth rate of 4.2% between 2017 - 2022[9].

Homecare Technology

The homecare technology sector consists of companies that focus on using technology to make the homecare sector more efficient. The level of technology within businesses vary – ranging from purely digital. One company might exclusively produces software connecting caregivers and the resident. A partly digital company provides human caregiviers while also creating its own digital solution. Finally, there are traditional elder care companies that focus on training and dispatching caregives. The problems an elder care technology company might target vary from problems in scheduling appointments for homecare, to monitoring elders at home, to training caregivers. In this essay, we only consider firms established within the last six years as homecare technology companies, since the term technology can mean different things in different time periods. The homecare technology sector is fragmented, and the total revenue of

[9] Curran, J. (2017, June). Golden years: Aging population, new programs and offerings will benefit the industry [PDF]. Los Angeles: IBISWorld. Inc

this sector is unknown. Some companies that have received the most venture capital and have caught most of the media attention include HomeTeam, Honor, HomeHero, and ClearCare.

"Pets"

The "pets" sector refers to technology-based companionship (sometimes with monitoring) solutions that use an animal "interface." Pets have been beneficial company for elders for many centuries. However, pets require a lot of care, and as people age the care pets require can become difficult. The creative, innovative pet alternatives in the elder care industry can provide the benefits without the burden. These "pets" require minimal care, and will not die if neglected. The "pets" can be delivered to elders whether the resident is living at home or in a senior living facility. Non-living pets have the advantages of (1) providing companionship, (2) cuddling and comfort, (3) requiring no feed or other care and (4) monitoring the elder's health and safety. This is not a well-developed sector within the elder care industry yet; companies such as PARO and ClearCoach are mostly know only through media coverage. PARO, a physical robotic pet, provides companionship and cuddling, whereas ClearCoach, provides an avatar pet displayed on an iPad which provides both companionship and monitoring. Neither "techno pet" requires, feeding, walking, or visits to the vet.

PART II: Case study

Company 1: Almost Family, Inc.

Almost Family is a NASDAQ listed company founded in 1976 which operates in 330 locations in 26 states. The company is one of the top businesses in terms of revenue in the industry when it comes to providing homecare services in the home health and personal care divisions – two of the largest revenue segments of the homecare industry combining 56.5% of the total homecare market revenue. In 2017, the company's 17,100 employees provided 160,000 patients with 3.7 million high-quality home health service visits[10]. Almost Family is also one of the homecare companies that includes technology within its business. The company has a healthcare innovation segment that mainly provides population health analysis, science and technology, and research. The mission of the healthcare innovation segment is to enhance the company by integrating technology into both home health and personal care segments. The technology segment is an increasingly important segment of the company as more new technology-based businesses join the industry, increasing the overall competition.

One of Almost Family's core business segments, home health, includes rehabilitation services and other health services, which are provided on a per episode basis. Another one of Almost Family's core business segments is the personal care division, which includes housework and medication assistance, as well as some hospice services. As of 2017, the company promotes itself mainly through recommendations by doctors, hospitals, and insurance agency staff.

The overall revenue of Almost Family is highly dependent on government subsidies — approximately 94% of its revenues are derived from the Medicare program through the home health and personal care segments[11]. The performance of the business has been growing steadily. In 2017, the business added 168 Home Health branches and 77 Personal Care branches. The company also completed several acquisitions including acquiring a Medicare-certified home

[10] Almost Family, Inc. (2018). 2017 annual report of Almost Family, Inc pg6. Retrieved from http://www.almostfamily.com/sec.php

[11] Almost Family, Inc. (2018). 2017 annual report of Almost Family, Inc pg5. Retrieved from http://www.almostfamily.com/sec.php

health agency in Fort Myers, Florida and a Medicare- certified home health agency and related private duty company in Key West, Florida. The acquisitions show the business is seeking more opportunities by expanding its resident geographical coverage.

Company 2: Amedisys, Inc.

Amedisys, Inc. is a NASDAQ listed elder homecare company founded in 1982 and one of the most well-established and advanced providers of hospice in the United States. It also has home health and a personal care divisions, totaling 408 centers in 34 states. In 2017, the company's 17,900 employees provided 370,000 patients with 7.5 million high-quality home health service visits[12]. About 80%-84% of the company services are paid by Medicare due to the demographics of the company's patient base (average age 81)[13].

The core business of Amedisys is its hospice division. The company is also currently using software to increase its work efficiency. In 2016, the company adopted a new electronic medical record system and enhanced employee training to ensure that professional standards are adhered to and medical record systems are used correctly. The number of new customers increased 17% per year between 2016-2018[14]. In the future, the company intends to focus on and expand hospice services to a wider range of patients such as those suffering from heart disease, lung disease, and dementia.

The performance of the business has been growing steadily. In 2017 alone, Amedisys made three home health center acquisitions totaling $31.5 million. They also added seven personal-care centers and two hospice care centers[15]. The current market cap of the company as of April 5, 2018 is $2.22 billion. The operating profit margin of the hospice division overall is

[12] Amedisys, Inc. (2018). 2017 annual report of Amedisys, Inc pg2. Retrieved from http://www.annualreports.com/Company/amedisys-inc

[13] Amedisys, Inc. (2018). 2017 annual report of Amedisys, Inc pg35. Retrieved from http://www.annualreports.com/Company/amedisys-inc

[14] Amedisys, Inc. (2018). 2017 annual report of Amedisys, Inc pg38. Retrieved from http://www.annualreports.com/Company/amedisys-inc

[15] Amedisys, Inc. (2018). 2017 annual report of Amedisys, Inc pg3. Retrieved from http://www.annualreports.com/Company/amedisys-inc

higher than the home health division (27.7% vs.11.8%)[16]. We also see similar results in Almost Family, which has a higher operating profit margin in its hospice division than the home health or personal care divisions— suggesting that a homecare business can achieve a better overall return by focusing on hospice rather than on home health and personal care. One operational concern, however, is that hospice services generally require specialized hospice nurses who are more difficult to find than non-specialized staff.

Company 3: Brookdale Senior Living, Inc.

Brookdale Senior Living(BKD) is a NASDAQ listed company. As of 2017, BKD had the largest total capacity of senior living communities in the United States. The company has 1,023 communities in 46 states and serves approximately 100,000 residents[17]. As a typical senior living business, its main business is operating retirement, assisted living, and continuing care retirement communities(CCRCs). BKD also offers a range of home health and hospice services to its assisted living and other communities.

Compared with the 80-95% government subsidy business model of homecare based businesses, Brookdale Senior Living has a low dependence on government subsidies, generating over 82% of its revenue from privately paying customers, and only 15.2% from government reimbursement programs (mainly Medicare)[18]. The business experienced a loss in the three consecutive years since 2015. A key reason for this loss is the increasing goodwill and asset impairment expense, which is the adjustment of the carry value and re-evaluated value of the company's assets. An increase in this number means a depreciation of the company's carried assets. the numbers increased from $58 million, to $249 million, to $410 million between the

[16] Amedisys, Inc. (2018). 2017 annual report of Amedisys, Inc pg37. Retrieved from http://www.annualreports.com/Company/amedisys-inc

[17] Brookdale Senior Living, Inc. (2018). 2017 annual report of Brookdale Senior Living, Inc pg5. Retrieved from https://brookdaleseniorLiving,inc.gcs-web.com/investor-overview

[18] Amedisys, Inc. (2018). 2017 annual report of Amedisys, Inc pg7. Retrieved from http://www.annualreports.com/Company/amedisys-inc

years 2015-2017[19]. This information suggests the business is losing money from poor investments in property and equipment.

It's important to note that residents are required to pay an entrance fee that varies from $100,000 to $400,000 to enroll in a BKD CCRC. This fee depends on the level of care needed, type and size of the living unit, the type of contract plan, and whether the contract contains life care benefits such as healthcare discounts. Since seniors entering retirement communities receive much less government aid than they do for homecare services, this is a very expensive initial fee for an average middle class elder. On the other hand, if a business person can operate a high quality, reputable CCRC, the business can generate large lump sums of cash in the short term and then use that to make higher return investments in sectors other than real estate. Note that this depends on the various states' restrictions on investments of upfront deposits collected in senior living facilities.

As the largest senior living facility in 2017, BKD's total market valuation is now only about 23% of its 2012 value, dropping from $5.6 billion to $1.29 billion. The overall market is not doing well, and BKD is selling off some of its real estate assets. Looking at both homecare and senior living, BKD's valuation is only about half that of hospice based Amedisys, which has a market cap of $2.22 billion. Later in Part III, I will dedicate a special section to talk about why the senior living industry is failing. For now, the largest senior living is still only, at maximum, half of the size of one of the third largest homecare companies[20]. This suggests there may be more opportunity in the senior living market for new businesses. As mentioned before, the senior living sector had a revenue of $66.3 billion in 2017 and is expected to have an annual growth rate of 4.2% between 2017 – 2022. However, the problem is still that businesses are encumbered by high real estate costs and other overhead expenses .

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[19] Brookdale Senior Living, Inc. (2018). 2017 annual report of Brookdale Senior Living, Inc pg69. Retrieved from https://brookdaleseniorLiving,inc.gcs-web.com/investor-overview

[20] Curran, J. (2017, June). Golden years: Aging population, new programs and offerings will benefit the industry [PDF]. Los Angeles: IBISWorld. Inc

Company 4: Five Star Senior Living, Inc.

Five Star Senior Living, Inc. (FVE) is a NASDAQ listed company founded in 2000 in Maryland, now headquartered in Newton, Massachusetts. As of December 31, 2017, FVE operates 283 senior living communities in 32 states. The business is mainly split into two major operating divisions, namely Five Star Senior Living and Five Star Rehabilitation Services.

The Five Star Senior Living Division includes standard independent living, assisted living, skilled nurse facilities – a business that overlaps with BDK. The Five Star Rehabilitation Services, however, does not overlap with BDK. The Five Star Rehabilitation Services division is designed for patients that need to stay a short period of time after an injury for rehab but do not plan to stay long term. These facilities include outpatient rehabilitation, day programs, and respite/short stay options.

Similar to BDK, FVE also has a low dependency on government subsidies with approximately 22% of all revenues from government subsidies in 2017, and most services are paid for privately[21]. Therefore the business is mostly targeted towards middle to high end residents who can afford to pay out of pocket.

However, this has not resulted in avoidance of the overall low financial performance. The market cap for the business has dropped almost 81% between 2013 and 2018[22]. The similarities we see among senior living facilities is that the businesses are highly dependent on real estate and generate a lot of costs, and the businesses are performing very poorly overall. The overall poor performance of competitors explains why BDK has experienced an 80% decrease in market value in the past five years, yet still remains the industry's largest elder care provider[23].

After reviewing two homecare businesses and two senior living businesses, we now turn to studying some technology-based companies. Compared to the traditional companies, newer, tech-focused companies often benefit from lower fixed costs. Instead of targeting the large and

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[21] Five Star Senior Living, Inc. (2018). 2017 annual report of Five Star Senior Living, Inc pg49. Retrieved from http://investors.fivestarseniorLiving,.com/home/default.aspx

[22] Yahoo! Finance. (n.d.). Five Star Senior Living, Inc.: Market Cap. Retrieved <April> <26>, <2018>, from Yahoo! Finance.

[23] Golden years: Aging population, new programs and offerings will benefit the industry [PDF]. Los Angeles: IBISWorld. Inc

varied range of the elder population, startups focus on a particular segment of the industry. Given the space constraints of this essay, I have chosen homecare technology companies and "pet" companies as my main focus, with two case studies of each.

The following companies are generally smaller and none of them have been publically listed yet. The smaller size of these companies means their model can more nimbly adjust to the changes in the market, however in-depth data on these businesses is less likely to exist. Therefore, I will mainly focus on introducing the businesses. In Part III I will compare, contrast, and provide my recommendations on the opportunities I see in these businesses.

Company 5: ClearCare

ClearCare was founded in 2010 and provides an enterprise-level cloud management system for more than 2,000 small and medium-sized elderly home care and nursing intermediaries. The company is a software and service company that operates by charging service fees based on the choice of service, including (1) Tools to grow agencies, such as Client Relationship Management Systems, Marketing Tools, Readmission Tracking, and Preferred Partners. (2) Tools to manage caregivers, such as application tracking, caregiver portals, employment screening, and work comp insurance. (3) Delivery Care tools, such as care finder scheduling, smart telephones, and online family rooms where families can access information and hold discussions. (4) Tools to optimize operations, such as billing and payroll, overtime/ACA tools, reporting and analytics, and payment processing. The company also offers offline company training and consulting services[24].

The services are bundled into software packages such as the Startup or Base package, which make it easy for customers to get started. The different packages vary in the number of services or the quality of services they provide. Services can be further customized based on the package. ClearCare offers incentives for large agencies and affordable startup packages for startups.

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[24] C. (n.d.). An All-In-One Home Care Platform. Retrieved March 26, 2018, from https://www.clearcareonline.com /platform

The uniqueness of the ClearCare business model is that it does not target traditional homecare businesses which recruit caregivers and connect with families. Instead, its core advantage is to connect different groups of people through technology so that care can be more consistent, efficient, and cost effective. I have put together a table below that displays which customer group it connects and how the ClearCare software improves efficiencies.

Table 2: ClearCare and its Customer Groups

Customer Group	**ClearCare software**
Caregiver Companies	Easy bill collection. Worker comp system. Easy booking system. Caregiver tracking system.
The Elderly	Professionally trained caregivers. Family room to connect with family members.
Caregiver	Easy scheduling system. Map integrated to app. Assign work only according to ability. Easy access to work required. Freedom to choose elder. Work safe system.
Payer (usually private pay by patient or the patient's children.)	Easy access to quality caregivers. Easy to use scheduling system. Easy to use caregiver filter system. Easy care giver background check. Family room to track parents. Split bill system.

ClearCare has received a cumulative of over $102 million in venture capital since 2012, showing a potential for smaller businesses entering this industry to get funding. The investors include Qualcomm, Battery Ventures, McKesson Ventures, Travelers Capital, and Bessemer

Ventures. Readers should note these venture capital names so they know where to pursue funding if they plan to start a new company[25].

Company 6: HomeTeam

HomeTeam was founded in 2014 to provide online platform services for elderly homecare and nursing. The company's philosophy is to improve homecare by empowering caregivers; it believes caregivers are to key to making homecare most efficient. In the U.S., home caregivers are not as respected as other care providers working in hospitals. The lower skilled caregivers that provide personal ,non-medical care earn only approximately $10 USD per hour. These lower skilled caregivers, or home care aides are often poorly trained. Given their low wages and lack of training, lower skilled caregivers have a very high turnover rate. Since these employees move frequently between homecare agencies, it is difficult to provide consistent training or enforce company-wide policies or standards. This is not in the best interest of the care provider, the business, or the customer.

To solve this issue, HomeTeam sets out to empower caregivers and families to make aging at home safer and simpler. The company starts by using behavioral and skill-based interviews to identify caregivers who want to build a career. It then empowers them through training, coaching, and offering long-term career paths within the company.

The technological aspects of HomeTeam also stand out. Some of these services include: (1) Automatically connecting users to the appropriate level of skilled care. (2) Finding caregivers in the desired locations. (3) Matching seniors with professionals who share their interests, such as art, poetry, history, or gardening. (4) Using technology to monitor the physical and mental health of the elderly 24 hours a day, seven days a week, or whenever requested. (5) Offering a high-standard of training and strict background review. Similar to ClearCare, these technologies make the homecare experience more convenient, and provide solutions traditional homecare businesses cannot, such as monitoring elders at home without another person present. One of the greatest concerns for elders staying at home is there is no emergency support. Elders living alone

[25] C. (n.d.). Funding Rounds – ClearCare. Retrieved April 25, 2018, from https://www.crunchbase.com/serach/funding_rounds/field/organizations/funding_total/clearcare-online

who only need a home caregiver once a week or so will not have anyone to call the ambulance if let's say he or she experiences a heart attack[26]. Technology is clearly a solution for elders who live alone

Since the business started, HomeCare has raised a total of $43.5 million with investments from Kaiser Permanente, Oak HC, IA Ventures, Lux Capital[27].

One key takeaway from this study is that a business can use technology to focus on a single problem within the homecare industry, in this case the problem of poorly trained home care aides. A business like this avoids huge investments in real estate and can receive good funding in the very early phrases of development. With the help of venture capital and a venture capital team, the business can grow quickly. Entrepreneurs who want to enter the elder care industry do not need to fully fund their businesses. An entrepreneur can still start small given the big market.

In our next section we will turn our attention to the elder care "pet" market.

Company 7: PARO

PARO is an advanced, interactive white seal robot developed by leading Japanese industrial automation pioneer AIST. The robotic pet has the documented benefits of animal therapy and is used in environments such as hospitals and extended care facilities, replacing live animal therapy and eliminating the logistical difficulties of taking care of a living pet.

[26] H. (n.d.). Reinventing in-home care starts with facing the hard truths of caregiving in America. Retrieved April 11, 2018, from https://www.hometeamcare.com/

[27] H. (n.d.). Funding Rounds – HomeTeam. Retrieved April 25, 2018, from https://www.crunchbase.com/search/funding_rounds/field/organizations/funding_total/hometeam

Figure 1: The therapeutic robot seal – PARO

Built to accompany an elder in ways similar to a living pet, the robot seal has a furry cover like a cute puppy. This seal invites cuddling. PARO holds the Guinness Book of World Record's certificate for the world's most therapeutic robot. PARO has been proven to reduce the stress of both patients and their caregivers[28]. It's main psychological effect is helping people relax. Through its posture sensors, the robot can react accordingly to its interaction with the patient. For example, when a patient pats it on the head, it will blink and shake its head "happily." Furthermore, if PARO does something the patient does not like, and the patient scolds it afterwards, PARO will remember its previous action and try not to repeat that action. Through these interactions, PARO responds as if it is alive. From the reactions of the baby seal we can see the advances in robotics. As robotics continue to improve, and robotic pets become cheaper and more "intelligent", companies can find new business opportunities.

Companionship can be expensive for elders. A daily caregiver visit may not be affordable to everyone, and living in a senior living facility can be costly as well. PARO offers an alternative of a one-time $6000 USD payment for a robotic pet that does not cause extra trouble for the elder. A robotic pet like this can be offered through a rental model to reduce its cost, and the robot may

[28] Lauth, L., & Plank, L. (2010). Measuring PARO's impact, with an emphasis on residents with Alzheimer's disease or dementia (Rep.). Vincentian Collaborative System.

also become more affordable as technology advances. It can be distributed within a senior living setting or a small community. I have not found any information of interest about the size and revenue of the company.

Company 8: Care.Coach

Differing from the robotic PARO pet solution, Care.Coach is a technology care platform that connects a global team of health specialists to older adults in America through a digital avatar. The digital avatar is displayed continuously on the screen of an iPad or phone. The avatar usually appears as a pet dog or a pet cat. The virtual pet focuses both on emotional care and physical care. Older adults can interact with it, and the pet is controlled by a Care.Coach employee who makes the avatar talk back. These real-time interactions build rapport and relationships, while the software has built in algorithms with sets of clinical and care-related best practices to guide the older adult in self-management and wellness-promoting protocols.

The avatar can also play songs for elder adults and upload preloaded pictures. Care.Coach works well in diverse patient populations, and, according to its official website, has been clinically proven[29] to reduce loneliness and depression while reducing falls among hospitalized elders by up to 85%. The avatar acts as a close companion, providing proactive advice and alerting the elder when something is amiss. For example, it might remind the elder that the floor might be slippery or to make sure his or her shoes are tied secure ly.

[29] C. (n.d.). Care.coach | engage your most complex patients: Enhance care, improve health, reduce costs. Retrieved April 24, 2018, from https://www.care.coach/

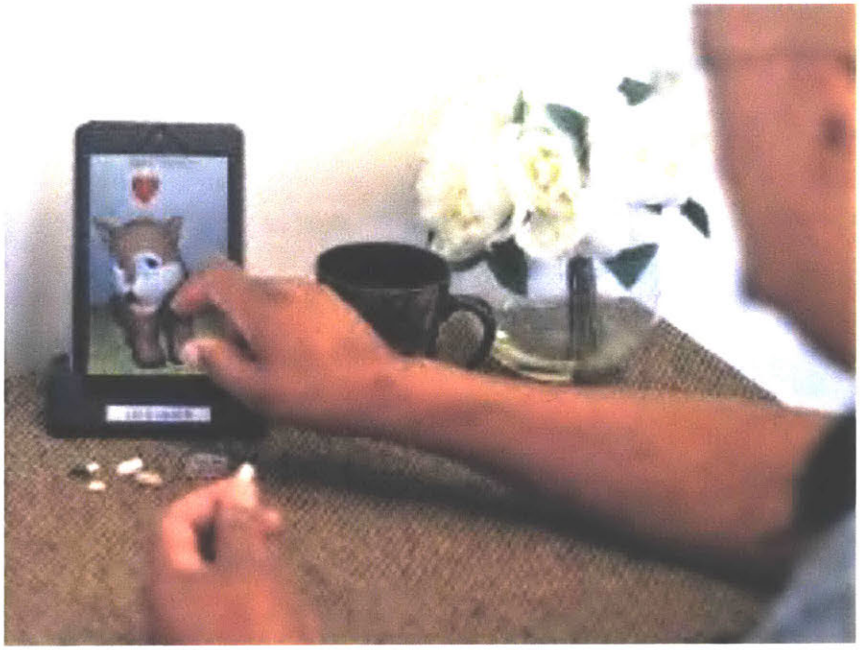

Figure 2: Avatar interacting with a senior at home

The main advantage of Care.Coach is that the business targets the dual problems of companionship and safety when human caregivers are not physically present. What's more, it adds human insight and intelligence since a real person, trained in elder care, is on the other end. With Care.Coach, human labor can be greatly reduced since the staff can be located outside of the U.S where wages are lower.In addition, each staff member can monitor several patients at once while a home health aide can only be in one place at a time, most likely caring for just one elder. The avatar provides 24*7 support, so if, for example, the elder has an accident and fails to interact with the avatar for a full day, the avatar will talk through the screen and ask the elder to reply. If there is no reply, the avatar will call the emergency contact number so someone can make sure the elder is safe and sound.

Similar software has been introduced by HomeTeam[30]. However, Care.Coach offers a more lively interface. Rather than simply installing software to keep track of the elder, Care.Coach integrates the pet interface with trained staff to provide both safety monitoring and

[30] H. (n.d.). Reinventing in-home care starts with facing the hard truths of caregiving in America. Retrieved April 11, 2018, from https://www.hometeamcare.com/

social interaction. Also, the concept of tapping into less expensive, overseas staff fulfillment is currently exclusive to Care.Coach.

Now that we've reviewed the business models of eight elder care companies, Let's turn our focus to comparing and contrasting the companies. In my conclusion I will offer my own recommendations for opportunities in the elder care sector.

Part III : Digital Opportunities for Augmenting Elder Care

In this essay I have discussed a total of eight companies covering sectors in homecare, senior living, homecare technology, and pets. From a eighteen thousand foot high perspective, the homecare industries appear bigger and more successful than senior living businesses. I didn't find any research that shows exactly why the senior living companies are failing, which is surprising given how big the industry is. However, I have concluded that there are six factors that explain, in part, why senior living companies have been performing so poorly.

One reason is the high overhead cost. BDK, for example, the largest senior living business, holds $5.8 billion in real estate assets while it only generates $4.7 billion of revenue each year[31]. The high asset repair cost and the non-liquidity of the real estate builds up burden for the business. Both BDK and FVE are selling their low return assets and replacing them with rental properties. Two, the government support of homecare has increased while the government support of senior living has decreased. For this reason, FVE's detailed turnaround plan pivots moving away from government revenue dependent businesses. Three, the demand for senior living is not as high as expected because of a marked preference for and improvement in homecare. Research shows over 78% of U.S elders prefer to age at home[32]. With the addition of new options to supplement home care, many elders are choosing to stay their own homes. Four, there have been reports of the mistreatment of elders in senior living facilities, damaging the industry's reputation. Five, many elders feel alienated and disoriented in a new setting. For example, if an elder used to drive in his or her home community, he or she may not feel comfortable driving in a new neighborhood, thus sacrificing independence. Therefore, he or she may prefer to live at home rather than move into a new community. Six, senior living facilities are expensive and require residents to pay out of pocket.

Comparing various homecare businesses, we see that the hospice sector is more profitable than the maintenance medical home health sector. From the 2017 Amedisys report,

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[31] Brookdale Senior Living, Inc. (2018). 2017 annual report of Brookdale Senior Living, Inc pg81. Retrieved from https://brookdaleseniorLiving,inc.gcs-web.com/investor-overview

[32] Coughlin, J.F. (2017). The longevity economy: Inside the worlds fastest-growing, most misunderstood market. New York, NY: PublicAffairs.

hospice's profit margin was 27.7% while home health's is only 11.8%, and personal care is only 1.3%[33]. Almost Family's financial situation is similar, with its hospice division having a 15% profit margin and home health and personal care division sharing an approximate 6.5%[34].This information shows an entrepreneur should focus on the hospice sector rather than the home health or personal care sector for a higher profit margin business.

Within a senior living business the retirement centers have the highest returns, followed by assisted living, and lastly CCRCs. The statistics also correspond with the amount of private pay each type of business receives. For example, in FVE, Independent and assisted living communities are approximately 88% privately paid, while heavy health assisted facilities such as skilled nursing facilities are only 22% privately paid[35]. If an entrepreneur wants to start a new company within the senior living sector, he or she should also focus on independent and assisted living communities, which are mainly privately paid.

There is a conflicting interest between the homecare and senior living sectors. Right now, it is more profitable for the elder care industry when seniors opt to live in elder communities. However, new advances in homecare services are making homecare a more attractive choice. Currently, the two senior living businesses we have introduced operate with an 80%-85% occupancy rate[36].

Comparing homecare technology companies, both ClearCare and HomeTeam focus on specific problems within elder homecare, and expect to receive investments very early on from venture capitalists. However, ClearCare may be more attractive to investors. First of all, ClearCare is more digitally based and can better adapt to a growing clientele very quickly, while HomeTeam is a half-software, half-people business which focuses on empowering caregivers,

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[33] Amedisys, Inc. (2018). 2017 annual report of Amedisys, Inc pg80. Retrieved from http://www.annualreports.com/Company/amedisys-inc

[34] Almost Family, Inc. (2018). 2017 annual report of Almost Family, Inc pg49. Retrieved from http://www.almostfamily.com/sec.php

[35] Five Star Senior Living, Inc. (2018). 2017 annual report of Five Star Senior Living, Inc pg49. Retrieved from http://investors.fivestarseniorLiving,.com/home/default.aspx

[36] Five Star Senior Living, Inc. (2018). 2017 annual report of Five Star Senior Living, Inc pg34. Retrieved from http://investors.fivestarseniorLiving,.com/home/default.aspx

which may be a disadvantage since procuring a well-trained pool of caregivers may prove to be initially difficult. However I argue that HomeTeam, with a model based on retaining quality care providers, has a more complete solution to the issue and therefore is more likely to have steady growth. If Almost Family or another company comes up with similar software at a lower cost, it could replace ClearCare. Therefore, ClearCare must make sure it maintains its position of providing the leading software option for elder care businesses. HomeTeam can improve both its software and its home caregiver training to stay viable. Opportunities exist for entrepreneurs with strong technical teams to create new options that are more efficient and specialized. However, if a business provides exactly what ClearCare does, it is unlikely customers will start switching to a startup business. Therefore, it may make sense for an entrepreneur to start small by implementing a half technology/half people model. If companies can maintain a superior staff, customers will become loyal to these providers and the company the providers work for.

Looking at the pet business, PARO combines software with robotics, while CareCoach combines software with a global health specialist team. The challenge PARO is facing is to come up with a more affordable (currently it costs $6000) and intelligent pet that can hold an elder's interest. The services PARO currently provides are limited since the "pet" cannot interact verbally. The pet is also lacking the emotions of a living pet. CareCoach does a better job of creating a promising business model, by outsourcing care and monitoring to countries where high quality staff will work for lower salaries. In addition, the avatar pet can respond appropriately and provide actual medical advice. However, given the difficulty in recruiting and managing a foreign health specialist team, it might not be suitable for entrepreneurs who want to work in the United States.

Next, let's look at some of the connections between homecare, senior living, homecare technology, and "pet" companies. The first two company models provide care for both those who prefer to age at home and those who choose to live at an elder facility. A major commonality between the two is they pull customers from large segments of the senior population. However, they have high overhead costs which make pursuing these businesses most suitable for entrepreneurs who have plenty of start-up cash. The market here is more established and new companies have to compete with listed, well-known companies such as Almost Family and Amedisys. The homecare technology companies and "pet" companies both target a much more specific problem and are more technology driven. These two types of companies in general require less funding, and if the business idea sounds feasible and investors like it, the entrepreneur can get great venture capital support. Some venture capital firms to look at are firms which have invested in HomeTeam and ClearCare, namely Kaiser Permanente, Oak HC, IA Ventures, Lux Capital, Qualcomm, Battery Ventures, McKesson Ventures, Travelers Capital, and Bessemer Ventures[37].

Overall, businesses are moving towards a model with lower fixed costs with a focus on augmenting the business with digital solutions. Homecare businesses are investing heavily in building an innovative segment to make home health and personal care businesses more efficient, unique, and competitive. Further digital solutions may include collaborations, such as a traditional homecare company partnering with an avatar "pet" company to provide a 24*7 monitoring system. The "pet" company can focus on the interface designs and making the "pet" more intelligent, while the homecare company can focus on quick reaction times and maybe move into the profitable hospice business.

Digital solutions can also augment senior living businesses by using homecare innovations within the senior living setting. One advantage to the senior living business model is that it can collectively bring together expensive resources and share them among the greater community. The community could, for example, purchase 12 PARO pet seals and share them among 50 elders, dramatically reducing the per person cost.

[37] C. (n.d.). Funding Rounds – ClearCare. Retrieved April 25, 2018, from https://www.crunchbase.com/serach/funding_rounds/field/organizations/funding_total/clearcare-online

Part IV : Recommendations for Starting Successful New Businesses in the Elder Care Industry

In this essay I have presented a broad perspective of what the elder care industry looks like. I discussed two business models within each industry: homecare, senior living, homecare technologies, and "pet" companies. The findings and insights are subtle, and somewhat buried within the essay, so I will sum up the five most important insights here.

First, through studying the homecare and senior living sectors, we found that homecare is overall a bigger and faster growing market than senior living. The total size of the U.S. homecare market is $92.5 billion in 2017 and senior living is $66.3 billion as of 2017[38]. In addition, homecare is expected to grow at 6.1% per year between 2017-2022, while the senior living is expected to grow at 4.2%[39]. Second, the senior living market is doing terribly. We looked at the two largest senior living businesses within the sector, Brookdale Senior living and Five Start Senior Living. Both have experienced an approximately 80% decrease in valuation within the last five years. Third, the two senior living businesses are doing poorly, in part from dependence on real estate, which adds up to roughly 80% of the businesses' total assets[40]. Brookdale Senior Living, the largest senior living business, has experienced encroaching growth in goodwill and asset impairment expenses from $58 million to $410 million between 2015-2017. Fourth, of the few new "disruptive" businesses (without complete detail of every business in the market, this term is classified as the businesses that appear on business media most often) that are entering the elder care market, most focus on homecare or technology support homecare. We discussed two of them: HomeTeam, a people and technology company which uses technology to empower caregivers, and ClearCare, a software company that makes communication between traditional homecare businesses, the elder, the caregiver, the family of the elder more efficient. Fifth, one

[38] Guattery, M. (2017, August). Home again: Demand for services will stay high but cuts in federal funding threaten profitability [PDF]. Los Angeles: IBISWorld. Inc

[39] Curran, J. (2017, June). Golden years: Aging population, new programs and offerings will benefit the industry [PDF]. Los Angeles: IBISWorld. Inc

[40] Brookdale Senior Living, Inc. (2018). 2017 annual report of Brookdale Senior Living, Inc pg13. Retrieved from https://brookdaleseniorLiving,inc.gcs-web.com/investor-overview

business opportunity is to provide companionship for elders at home alone. We looked at two "pet companies" that were created specifically to solve this problem. A unique feature in one of the firms, CareCoach, is that it connects with healthcare specialists from overseas to help assist elders in the U.S at a reduced cost. It also provides a monitoring function to provide a safety net for elders in case anything happens to them while no one else is at home.

Next, I would like to present my recommendations to interested investors by answering the question, if I had $1 million to invest in elder care what should I do? There are many opportunities within such a large market. It makes to invest in an existing company that is well positioned for the future. Companies that focus on homecare or homecare solutions are your best bet since this is the preference of the majority of elders. The next thing to consider is how much of a risk you're willing to take with your money.

If you're looking for the lowest risk, you can invest in a well-established homecare company with a good reputation. Look for a modest and steady business that has a long-term plan and won't experience much variance or loss.

Another low-risk option would be to start your own small homecare company for seniors who don't need specialized medical care, that focuses on providing excellent service. Perhaps you work to make your business feel local using "Neighbor" in your company's name. You could also create a sense of community by planning events for your customers, such as a picnics, pot lucks, or movie nights. Since you wouldn't need to build or rent living facilities, this type of business would have a low overhead. As the business grows and gains in reputation. you could expand to other towns and states but aim to keep that local feel. This company would operate like the HomeTeam model, based on caregivers supported efficiency technology. The idea is to get into the market and focus on how to make it better, more convenient, less expensive, or friendlier. The money distribution would require 20% for initiating the business, such as the finding and training of care providers, and 80% focused toward making my business better than the competition. The idea is that the business won't succeed unless it does something better — more reliable, more efficient, less expensive, or offers something new altogether.

What I Would Do for My Very Own Business Model

Investing in a business that solves problems of seniors living on their own by using new technology is also a great idea, and my personal preference. One of the biggest problems for younger seniors who are still in good physical condition is loneliness and a lack of purpose. That's why I envision an online platform where young people from overseas can virtually socialize with American seniors (60-80 years old). The young folks would gain eye-witness knowledge and the seniors would delight in making young friends. The idea simple, like creating a Twitter, Snap, Slack, or WhatsApp after Facebook was created, but the focus on providing opportunities for elders to connect with young people. This is of course a "catch line" for investors: "This is going to be the video WhatsApp for seniors " The real business can be much more complicated and unique. This model may not have been feasible in the past, but as the population ages more and more seniors will feel comfortable using technology. We'd make it easy for them with an intuitive interface, large type, and a read-out-loud feature for the vision impaired. By building a translator into the software — something that wasn't reliable until recently — communication between countries would be easy.

I would use about 10% of a $1 million budget to build the software, 30% of the budget to find the right elders in the U.S and help them set up their profiles, 30% for targeted marketing on social media overseas, and save 20% to provide a safety net, in case the business needs extra money. The business model is similar to " video WhatsApp" online platform connecting people outside of the country with senior citizens in the U.S. Earlier, I introduced a digital avatar company called ClearCoach, which reduced costs by using health specialists half way across the world. This inspired me to also tap into the world market. The global youth population is large enough to supply enough "fans" for the elders. Whereas a business just within the U.S would not have a wide enough audiene to allow for multiple pairings with American seniors.. As membership and visits to the site increase, this online community could grow exponentially. Its popularity would make a target of advertisers who would provide my business with revenue. An additional way to generate income would be through offering expanded membership services for a fee. The potential is enormous. Also to consider, though, is that an overseas business may be harder to manage that a domestic one.

I would start small by gathering around 1,000 users. My marketing department would ask teenagers and young adults (ages 16-30) what topics they are interested in, and we'd invite seniors with similar interests to join the platform. Our staff would help the pre-selected seniors to present an online profile that would catch young people's attention. Perhaps the senior took cooking lessons with a famous chef, used to work at a National Park, fought in Vietnam, used to be a cowboy, marched with Martin Luther King, Jr, or met John F. Kennedy. Seniors love sharing their memories, and younger folks would get first-hand perspectives. If a student wanted to know what it is like to go to medical school in the U.S., her or she could connect with a retired doctor. What's it like to live in New York City? What's it like when it snows? These are all questions that seniors could help answer or would like to share in his or her spare time. The can be a platform where elders organize his or her stories, supported by the business staff, constantly thinking about what do other people like to know, and through the process gain self-esteem. Young people would view photos and short profiles online and invite seniors to chat by requesting an appointment at a convenient time. The older adult could choose to accept or decline. Seniors who answered the most questions could receive rewards, like a free month of membership. I would start charging membership fees 12-18 months after start up, assuming it would take that long to grow a large membership and garner attention. I would offer specialized features for additional fees.

Looking at the world market, the opportunities are limitless. Especially since there is not yet a dominant business in this niche market.. Facebook is obviously a a pooular platform that already exists, as are Snap and WhatsApp. They all grew by targeting a specific audience. My business will focus on elder care, and go global thanks to recently improved translation tools., Of course, there's also a high amount of risk with an unknown business. You can't know if it will work well until you try. So, while I've listed some of the possibilities for growth, I'd be aware that my model would need to be flexible based on what was working the best. The ultimate goal would be to sell the company at a profit or expand to other revenue models such as connecting youth and elders vice versa or moving into making and distributing my own senior homecare equipment. WhatsApp sold its business to Facebook for $19 billion in 2014[41].The

[41] Covert, A. (2014, February 19). Facebook buys WhatsApp for $19 billion. Retrieved April 15, 2018, from http://money.cnn.com/2014/02/19/technology/social/facebook-whatsapp/index.html

same could happen to my business in the future. Otherwise we can expand to other markets as more people join the platform.

This business model aligns with our previous findings and general knowledge: (1) the elder population is growing; (2) these elders are more tech savvy than past generations. (3) We can connect people globally online rather than just locally within the United States. (4) Translation software is much improved, so people globally can actually connect in spite of a language barrier, since there will be a translation channel within the chat box. Users can connect via webcam, or, if the student doesn't speak English well, he or she can type and the software will translate and read it for the elder. The three trends above I think make this business possible in 2018.

There are many motives for the Facebook user. Her or she could (1) learn English, (2) meet someone from a different part of the country or the world (3) Hear stories he or she is interested in. The incentives for the elder are to: (1) connect with people that find him or her interesting, and (2) interact with young people. The idea is the elder is trying to bring out the most interesting side of him or herself which helps build self-esteem, honors memories, and lifts spirits. There will also be a reward system for elders who make a certain number of appointments. These points could later be used towards a reward., for example a food coupon or a free month of Netflix subscription.

The first challenge is to get enough coverage and get as many people on this platform as possible. be successful, the business needs to gather a big enough user base before it can charge its users. Herein lies the risk: it's impossible to know if or when this will happen. The "neighborhood" and online social business models both have advantages and disadvantages. It is difficult to predict which one is better without actually experimenting. I prefer the second model because I have a technology background and would prefer a high risk but potentially faster growing company.

The two business models both have advantages and disadvantages. It is difficult to predict which one is better without actually experimenting. I prefer the second model because I have a technology background and would prefer a high risk but potentially faster growing company.

One final note, in this essay I also talked a lot about the failing senior living industry, some may see this as an opportunity to enter into the market. If the entrepreneur is talented in investing in real estate, maybe joining the senior living sector is more profitable. This is absolutely correct. I assume, from my best estimate, the two business models outlined here hold the most promise. Above are just two examples. The investor should consider his her own goals and strengths when making a decision.

Conclusion

Joseph F. Coughlin, the founder and director of the MIT AgeLab, says we are entering "The Longevity Economy" which he believes is the world's fastest-growing and most misunderstood market[42]. The goal of this paper is to begin to understand the market better so that entrepreneurs and business people interested in entering the elder care industry can make good decisions. One problem for those attempting to research the sector is that most information focuses on only one specific area. In this paper, I use a business lens to try to provide an overview of the various segments, the problems one might encounter, and the opportunities that are available. You'll also find my recommendations.

I examined eight diversified companies that represent a portion of the elder care business and provide insight into the industry. I conducted general research as well as studied the annual financial reports of the businesses to determine which divisions have the most investment potential. This essay only covers a very small portion of the opportunities with the elder care industry. Other business opportunities such as elder food preparation, elder medicine, elder home renovation and many others are not discussed within this paper because of the essay's limited scope.

Another limitation of the essay is its lack of in-depth analysis within the industry segments and businesses. This is by design so the reader can quickly acquire an overview of the material and the potential opportunities as a starting point for further inquiries.

The last limitation of the essay is its expiration date. Much of the advice provided in this essay is based on the current situation. Soon, the influx of new technological innovations and more efficient business models will make this information obsolete. The predicted growth of the demand for elder care will most likely hasten change, but also provide a wide range of opportunity.

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[42] Coughlin, J.F. (2017). The longevity economy: Inside the worlds fastest-growing, most misunderstood market. New York, NY: PublicAffairs.

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