

The Aging Readiness & Competitiveness Report

GERMANY





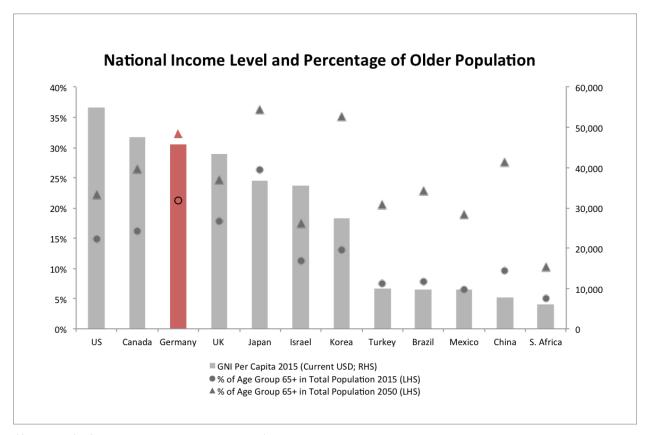
Overview

Germany is one of only five "super-aged" societies in the world, and its population of those age 65 and above is projected to grow 41 percent to 24 million individuals by 2050. As a result, in 2050, the total number of those age 65 and older will be equivalent to one-third of the projected total population of 75 million. This

shift is due in part to the shrinking of the traditionally defined "working age" population, or those ages 15 through 64, which will fall by nearly 23 percent – from about 53 million in 2015 to about 41 million by 2050.³

In light of this demographic shift, German policymakers are working to increase labor force participation among older adults. Through retirement reforms and

³ Ibid.



(Sources: OECD, World Bank, United Nations)

¹ A society is deemed as "super-aged" when its population age 65 or older exceeds 21 percent of the total population.

² UN Population Division. (2015). *World Population Prospects: 2015 Revision*.

retirement-age adjustments, as well training and education programs, the country was able to increase employment among those ages 55 through 64 by nearly 25 percentage points to 66 percent between 2004 and 2014. While labor force participation among those age 65 and older is still low compared to the OECD average of 14.1 percent, retirement reforms have contributed to its rapid increase between 2005 and 2015 from just 3.4 percent to 6.1 percent.

While labor force participation is still relatively low, Germany's older adults have high levels of volunteerism and community engagement. They are also more often living independently than counterparts in other OECD countries. However, accessibility of buildings and the public transportation system remain barriers to mobility. Recognizing this issue, the government began to implement programs to improve and modernize dwellings in 2009, and legislation to improve accessibility of stations, buses and trains passed in 2013. It has also initiated and funded innovative community-support projects to ensure that older adults can remain independent in their own homes for as long as possible.

Aging in place is also facilitated by the high levels of technology adoption by Germany's older adults. However, there remains a digital divide between older adults and the rest of the German population. In order to address this, in 2013 the government began to establish programs specifically geared toward

helping older adults gain the necessary skills to use technology. In addition to training programs, it is leveraging technology to create smart household and community-based solutions to support aging in place. Germany's Ambient Assisted Living (AAL) sector, which seeks to enhance the quality of life of older people and strengthen Europe's industrial base through the use of Information and Communication Technologies (ICT), is projected to grow from EUR 54 million (USD 61 million) to EUR 252 million (USD 283 million) by 2020.

Technology is also being employed by Germany's healthcare sector as part of a broader effort to improve service to older adults, with a focus on underserved rural areas of the country. While the prevalence of chronic conditions is high, 81 percent of those age 65 and older report that they receive the treatment they need in a timely manner from the country's universal healthcare system. Germany is also one of the few countries with mandatory long-term care (LTC) insurance. In response to the increasing demand for LTC services, recent reforms have placed particular focus on improving conditions for both recipients and providers of homebased care, as more than two-thirds of LTC recipients age 65 and older receive the care services at home, instead of in institutions.4

⁴ Federal Statistical Office. (2016). Older People in Germany and the EU.

Community Social Infrastructure

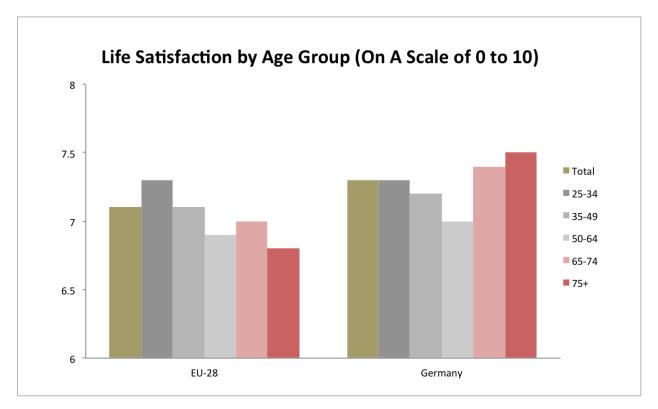
The older population in Germany is highly independent and socially engaged. Volunteerism is growing among older adults, thanks in part to government-sponsored programs that help connect older people with volunteer opportunities that take advantage of their unique experience and skills. Both government and non-governmental organizations (NGOs) have also used cross-generational interaction as a way to provide community support to older adults. Accessibility of buildings and transportation is an area that requires more effort, partly due to a lack of national regulation, although in 2013 the

government set goals through legislation to make transportation more accessible.

Social Connections

As a result of high life expectancy and improved health among older adults, 36.4 percent of Germans aged 65 and older who reside in private households, as opposed to care institutions, were living alone as of 2014 – higher than the OECD average of 31 percent.⁵⁶ In 2011, nearly

⁶ No data were available for Japan and Turkey.



(Source: Eurostat)

⁵ OECD Affordable Housing Database. (2016). Living Arrangements by Age Groups.

three-quarters of those age 65 and above were living independently either alone or with a spouse. Older Germans are also reportedly happier than the general population. According to EU survey data in 2013, Germans ages 65 through 74 on average rated their overall life satisfaction at 7.4 out of 10, and those age 75 and older rated theirs at 7.5, higher than the average rating of the total population of 7.3. Germans within these age groups are reportedly happier than the 28-country EU average of 7.0 and 6.8, respectively.

One factor that could account for high levels of life satisfaction is the prevalence of volunteerism. According to the Federal Ministry of Family Affairs, Senior Citizens, Women and Youth, in 2014 more than 45 percent of people age 50 through 64 engaged in volunteer work, and 34 percent of seniors age 65 and older did the same - an increase of 11 percentage points from 1999, and greater than all other age groups apart from those ages 14 through 29.9 In a 2014 study, more than 60 percent of those age 50 and older cited a desire to help shape and contribute to society, as well as to engage with other people and remain socially active as primary reasons for volunteering.¹⁰ German seniors find many opportunities to get involved, ranging from helping out with neighborhood projects to giving private instruction in schools to assisting other older people in nursing homes.¹¹

One initiative, the Senior Citizen Offices ("Seniorenbüros" or SCOs), has been crucial to supporting older adults seeking social engagement by connecting them to volunteer opportunities. First established in the 1990s, it was a product of a social and political effort to change the negative image of aging that dominated German society in the late 1980s and early 1990s that cast older adults as a burden. 12 The SCOs have successfully matched older people to volunteer opportunities that utilize their existing skills, and the program has grown considerably since its inception.¹³ During the first five-year pilot phase of the program, there were only 44 SCOs in place, but today there are about 380 SCOs that have been identified by the Association for Senior Citizens' Offices (Bundesarbeitsgemeinschaft Seniorenbüros, or BaS) across Germany. 14

While the primary function of these offices is to coordinate volunteer activities for older people, they also serve as a meeting place and offer various cultural

Monostori, Judit and Murinko, Livia. (2015). Family and Household Structure.

⁸ Eurostat. (2015). Quality of Life in Europe – Facts and Views – Overall Life Satisfaction.

⁹ Federal Ministry for Family Affairs, Senior Citizens, Women and Youth. (2017). Volunteering in Germany: Key Findings of the Fourth German Survey on Volunteering.

The German Centre of Gerontology. (2014). German Survey on Volunteering (FWS).

¹¹ Schools: Partners of the Future Initiative. Active Life in Old Age – Honorary Commitment of German Seniors. (2017).

¹² Federal Ministry for Family Affairs, Senior Citizens, Women and Youth. (2011) A New Culture of Ageing: Images of Ageing in Society.

The Association for Senior Citizens' Offices.(2015). Engaged on Site.

The Association for Senior Citizens' Offices.
 (2016). Seniorenbüros – Entwicklungszentren für innovative Seniorenarbeit.

"The Senior Citizens' Offices have provided many volunteers, and especially during times when Germany has had a lot of refugees. They are part of a greater initiative which encourages different generations within society to look out for each other."

Lena Dorin, Health and Long-term Care
 Senior Policy Officer, BAGSO

activities. For those interested in engaging voluntarily, there are a wide range of opportunities relating to culture, the environment, politics, health, and social affairs. 15 The specific activities offered by SCOs vary across communities, and Lena Dorin of the German National Association of Senior Citizen's Organizations (BAGSO) observes, "The Senior Citizens Offices have provided many volunteers, and especially during times when Germany has had a lot of refugees. They are part of a greater initiative which encourages different generations within society to look out for each other." Over 28,000 people volunteer with the help of SCOs across Germany, together dedicating about 2.5 million hours each year.16

Aside from the SCOs, there are over 5,000 other locally based offices that work to support seniors and encourage their active participation in society.

For example, many of these offices encourage political participation among older adults and are organized and funded by local governments, political parties, non-profit organizations, unions, churches, and more. In some states and municipalities, these offices are involved in organizing elections where residents have the opportunity to elect a senior representative, who serves to promote the interests of the older population in local government offices. In fact, according to Frank Leyhausen, Managing Director of MedCom International, "There are some mayors of German cities that rely on these local offices for seniors for consultation, so that they may be more receptive of the needs of the older adults living within their jurisdiction."

Intergenerational Connections

In addition to actively encouraging older adult participation in volunteer activities, the federal government is working to foster intergenerational connections and strengthen social cohesion through the program of multi-generational houses ("Mehrgenerationehäuser"). Multi-generational houses are locations in communities where people of all ages can go to meet and engage in various activities.¹⁷ The model project was featured by the United Nations Economic Commission for Europe as a best practices example for the social integration of older

The Association for Senior Citizens' Offices.(2015). Engaged on Site.

The Association for Senior Citizens' Offices. Senior Citizens' Offices in Germany.

 $^{^{\}rm 17}\,$ "Houses" in the context of this program does not mean residential spaces.

adults.¹⁸ It first received funding from the federal government in 2003, and 450 houses had been established and subsidized since 2006.¹⁹ Currently there are over 550 operating,²⁰ with federal funding secured until at least the end of 2020.

The activities and services that take place in multi-generational houses are initiated by the citizens of the communities themselves and often include volunteering to help children do their homework, or providing basic instruction. Seniors can volunteer to read books to children once per week, and multi-generational houses also run a "rent-a-granny" service to provide relief for parents. Conversely, teenagers can show older people how to use computers and mobile phones in these spaces.²¹²² The project is designed to provide social opportunities for older people who feel lonely and offer support for young families who have no grandparents nearby. Further, by bringing different generations together, the houses have alleviated the impact of the divided family structure in Germany, where different generations are more and more frequently living apart.

¹⁸ United Nations Economic Commission for Europe. (2010). Policy Brief: Integration and Participation of Older People in Society.

The focus of multi-generational houses is more about providing a space for older people to connect with both each other and younger people than it is about specifically increasing the rates at which seniors volunteer, and they are an equally important part of Germany's plan for an aging population. Nationwide, nearly all administrative districts and urban municipalities now have their own multigenerational houses.23 According to Lena Dorin, "The multi-generational houses are a good example of how Germany can deal with the different issues both now and in the future that are presented by demographic change." However, other experts feel that these houses can be further improved by placing more emphasis on educational activities, and that there are still not enough activities and offerings that emphasize the role of the family in supporting older people.²⁴

Physical Infrastructure

While the majority of older people in Germany live in close proximity to public transportation, vehicles and stations often remain without age-friendly accommodations. In order to address this deficiency, the government has adopted legislation on improving transportation accessibility and has set a long-term goal of removing all barriers affecting older people and those with disabilities by 2022. Furthermore, the German housing market

¹⁹ World Health Organization. (2015). World Report on Ageing and Health.

²⁰ Interview with Lea Knopf, BAGSO, April 2017.

Mompo, Fernando L. (2014). Mehrgenerationenhaus: A Case for Intergenerational Collaboration.

²² Oltermann, Phillip. (2014). Germany's "Multigeneration Houses" Could Solve Two Problems for Britain. *The Guardian*.

²³ Interview with Lena Dorin, Health and Long-Term Care Senior Policy Officer BAGSO, February 2017.

²⁴ Interview with Sonja Ehret, Institute for Gerontology at the University of Heidelburg, January 2017.

is ill-equipped for the aging population, as neither the number nor the furnishings of homes meet the needs of older adults. Accordingly, government programs have focused on making existing homes and spaces more age-friendly.

Currently, almost 90 percent of Germans live within one kilometer of a public transit stop. German buses and trains are both reliable and modern.²⁵ In fact, the country's infrastructure was ranked number one according to the World Bank's Logistics Performance Index in 2016,²⁶ and nearly 70 percent of those age 50 and older express satisfaction with their local public transportation systems – higher than in all countries observed in this study, apart from the UK, China, and Korea.²⁷ However, despite investing more in public transportation than any other OECD country aside from the U.S., 28 this sector does not adequately address the needs of older people, and accessibility gaps remain. For example, trains are still being used that cannot accommodate wheelchairs, and only half of train stations in Germany are barrier-free.29

In an effort to address these shortcomings, the German government passed new regulations on accessibility through amendments to the Passenger Transport Act (PBFG) 1, effective January 1, 2013. For example, it mandated that the gap between the ground and vehicle entrance be made smaller in order to allow older people with wheelchairs or walkers to board comfortably, and that bus ramps have 150 centimeters of space to better accommodate wheelchairs.³⁰ The legislature established a goal of making the public transportation system completely barrier-free by the beginning of 2022.³¹

The lack of accessibility in housing for older people presents an even greater challenge. In Germany today, only about 5 percent of those age 65 and older live in barrier-free apartments. Eightythree percent of those 65 and older are living in older buildings that are generally less accessible than more recent construction.32 In recognition of the need to create more accessible and barrier-free housing to accommodate the increasing number of older adults preferring to age in place, the government has allocated funds to facilitate the conversion of buildings and apartments into barrier-free living spaces. One major use of these resources comes in the form of the Age-Appropriate Rebuilding ("Altersgerecht Umbauen") Program, for which the government provides subsidies through the KfW Bank Group³³ for the renovation and reconstruction of residential housing. Depending on home-ownership status, those interested

²⁵ Jaffe, Eric. (2012). 5 Reasons Germans Ride 5 Times More Mass Transit than Americans. CITYLAB.

²⁶ The World Bank. (2016). International LPI Global Ranking.

²⁷ HelpAge International. (2015). Germany: AgeWatch Report Card.

²⁸ OECD Data. (2016). Infrastructure Investment.

²⁹ SoVD – Socially Connected Germany. (2015). How Is Germany Accessible?

³⁰ Federal Association of Public Transport. (2014). Full Accessibility in Public Transport: Information for Local Public Transport Authorities with the Objective of the Amended PBefG.

³¹ Ibid.

³² Capital Language Solutions. (2016). Making Housing Accessible.

³³ A government-owned development bank.

in converting a property to be more agefriendly can apply for a loan of up to EUR 50,000 (approximately USD 56,200) per residential unit at an annual interest rate of 0.75 percent, and for a grant of up to 12.5 percent of all eligible costs with a maximum of EUR 6,250 (approximately USD 7,000).³⁴

The Age-Appropriate Rebuilding Program was developed in the context of a growing number of older people in need of care. Structural inefficiencies in private homes account for about one-quarter of falls experienced by older Germans on a daily basis, highlighting the need for housing renovation to ensure the safety of seniors with mobility challenges. By the end of 2013, a total of 120,889 residential units had been renovated using the total of EUR 2.3 billion (approximately USD 2.6 billion) invested.³⁵ The popularity of the program is rising rapidly – the demand for subsidies rose by one-third between 2015 and 2016, and as a result, the 2016 budget of over EUR 49 million (approximately USD 55 million) was exhausted only halfway through the year.³⁶ According to Nicola Röhricht of BAGSO, "The Age-Appropriate Rebuilding Program is beneficial for older adults seeking barrier-free housing as well as small and medium-sized companies operating in the market, making it a win for all sides."

34 KfW Bank. (2016). Reduce Barriers: Now Modernize and Think of Tomorrow.

"The Age-Appropriate Rebuilding Program is beneficial for older adults seeking barrier-free housing as well as small and medium-sized companies operating in the market, making it a win for all sides."

Nicola Röhricht, Master of Cultural Education,
 Service Corporation of BAGSO - Project
 Management Digital World

In addition to financing barrier-free conversion, the Federal Ministry of the Interior, together with the KfW Bank Group, has been promoting smart home solutions within the context of the program since 2012. These solutions provide apartments in which older adults can reside more safely and comfortably through additions like networked emergency call systems or systems that allow for remote operation of doors, roller shutters, or windows. Enabling older people to live comfortably at home can help them delay or avoid going to a nursing home.³⁷

Community Support for Aging in Place

The Seventh Report on Aging published by the German government in 2016 emphasizes that Germany's strategy of dealing with demographic change is rooted in the principle of subsidiarity, with all local and state governments being just as important as the federal government.

³⁵ KfW Bank. (2014). Evaluation of the Age-Appropriate Rebuilding Program.

³⁶ APA-OTS News. (2017). Federal Ministry of the Interior and KfW: 2017 More Support for Burglary Protection and Accessibility in their Own Four Walls.

³⁷ Kommunalwirtschaft.edu. (2016). State Secretary Adler: Smart Home Solutions for Age-Appropriate and Safe Living are becoming Increasingly Important.

As such, one of its highest priorities is to strengthen municipalities and enable them to create an environment that fosters independent living in older age. Particular emphasis is placed on the integration of seniors into the community, as well as the creation of social networks.³⁸ This strategy also aims to explore models for the cohabitation of younger and older people by establishing community housing projects to support the creation of multigenerational and inclusive residential options.³⁹ One example of these projects is located in the municipality of Ursensollen in Bavaria, which plans to build an apartment complex with 16 rental units dedicated to people age 60 or older and people with disabilities. A daily care center, an outpatient service center, a neighborhood assistance center, and a café are to be integrated into the residential complex. demonstrating how to ensure close-tohome availability of care and support in a village-style community.40

In Cologne-Nippes, a cross-generational housing model project with a twist is in development; it seeks to bring older people together with younger people from different social backgrounds and family structures including singles, couples, and families. This particular initiative is taking innovative approaches to fostering community relations among older

³⁸ Federal Ministry for Family, Senior Citizens, Women and Youth. (2016). The Seventh Old-Age Report. residents. A "CoHousing floor" with four residential units is being built, where each individual will have their own private room and bathroom but share a kitchen as a means of facilitating community life and encouraging mutual support.⁴¹ The federal government is providing funding during the project's model phase, after which local governments and communities will decide whether to provide funding for continued operation.

Another program that promotes shared living among different age groups is Living for Help ("Wohnen für Hilfe"), whose origin is the "home share" housing model that emerged in London in the 1980s as a result of the high rental prices.42 In Germany, the model was first piloted in the early 1990s and focuses on helping older and younger people establish living arrangements together. Older adult participants in the program provide students or young professionals with affordable housing arrangements, and instead of paying rent, 43 young residents provide company and assistance with daily tasks that may include cooking, cleaning, shopping, and assistance with technical devices, both within and outside of the home, and they are generally responsible only for incidental expenses. As a guideline, the young residents provide an hour of

³⁹ Ibid.

⁴⁰ FORM: Nationwide Association of Shared Living. Federal Model Program: Living Together in a Self-Determined Community – Community in the Center of the Village.

⁴¹ FORM: Nationwide Association of Shared Living. Federal Model Program: Living Together in a Self-Determined Community – From the Residential Community to the Little Cohousing for the Elderly in an Age-Mixed Housing Project.

⁴² Holzamer, Hans-Herbert. (2008) Opitmal Living and Living in Old Age.

⁴³ Despite not paying rent, students may be responsible for other expenses.

help per month for every square foot of living space. 44 The program enables older participants to receive free additional assistance they might need in order to live independently. Living for Help is frequently coordinated by local universities, often in cooperation with NGOs and/or the municipalities themselves, depending on the location. For example, in the city of Cologne, it is operated through collaboration between the city's housing office, the University of Cologne, and the Senior Citizens' Representation of Cologne (Seniorenvertretung der Stadt Köln).45 The program currently exists in over 30 municipalities.46

Some NGOs have also been able to use government funding to establish successful programs that strengthen interaction between generations as a means of providing community support for older adults. One example is Bridges Between Generations (Generationsbrücke), a program launched in 2012, which organizes children's visits to nursing homes. The concept for Bridges Between Generations came from Bessie's Hope, an organization based in Denver, Colorado, which founder Horst Krumbach discovered while traveling in the United States. While the interactions between seniors in nursing homes and children took place as a group activity in Denver, Krumbach's unique approach with Bridges Between Generations is its method of pairing seniors Horst Krumbach, Founder of Bridges
 Between Generations

with young children, two-thirds of whom are in elementary school. The rationale behind this approach is that children of this age group have no preconceived notions about dementia, which is extremely common among nursing home residents. Setting up partnerships between nursing homes and schools requires a two-day training program attended by social workers, nursing home administrators, and teachers from school and kindergarten, which enables them to implement the concept in their respective institutions. These children are then paired with older individuals for a year and visit the nursing homes on either a bi-weekly or monthly basis.47

As of 2016, the Bridges Between
Generations program had 113 cooperating
partners across the country. Ninety
percent of funding comes from the
German Ministry of Family Affairs and
other foundations, including the BMW

[&]quot;Nobody in the nursing homes can reach the hearts of older people as well as kids, so connecting these two generations brings joy, laughter, and fun to older people's lives – they feel valued and needed again. It's a win-win-win situation, because the interaction between the two generations not only helps the participants, but society as a whole."

⁴⁴ Citizens' Institute for Social Engagement in Frankfurt. (2014). Living for Help: Living Partnerships between Young and Old.

⁴⁵ University of Cologne. Living for Help – Cologne.

⁴⁶ Ottlewski, Lydia and Bajde, Domen. (2013). Consumer Culture Theory.

⁴⁷ Interview with Horst Krumbach, Founder of Bridges Between Generations, February 2017.

Foundation, Herbert Quandt, and Caritas Germany. Krumbach, the pioneer of the project, had been working in nursing homes for 20 years before starting Bridges Between Generations, and he hopes that it will help to make interactions between the young and old become a norm in German society, which he believes is necessary for tackling the challenge of demographic change. According to Krumbach, "Nobody in the nursing homes can reach the hearts of older people as well as kids, so connecting these two generations brings joy, laughter, and fun to older people's lives – they feel valued and needed again. It's a win-win-win situation, because the interaction between the two generations not only helps the participants, but society as a whole."

In addition to providing direct support, NGOs in Germany also work to create and promote a more accurate and positive image of aging and to combat notions that older adults are burdens on society. One of these is the German Senior Citizens League (Deutsche Seniorenliga, or DSL), which has been working to achieve this goal since 1993 by giving older people a voice through its publications and presence in various media outlets, and by researching important topics that affect this demographic.⁴⁸ DSL offers advice concerning health and common medical issues, financial matters, and topics related to the everyday life of older adults, and has free online informational resources.⁴⁹

⁴⁸ German Senior Citizens League. About Us.

⁴⁹ German Senior Citizens League. Free Information Material.

Productive Opportunity

Germany's older adult labor force participation rate remains low, but is growing rapidly. Germany's "baby boom" generation will begin to reach the retirement age of 65 in 2019, which will accelerate the reduction in its labor force. In order to address this, the government has undertaken retirement reforms, including raising the pension age and introducing flexible retirement options. It has also established programs to provide employment opportunities, education, and training, and to improve workplace conditions for older employees.

Labor Force Participation/Employment of Older Adults

Older Germans in general are less active in the labor force than counterparts in other OECD countries. As of 2015, the labor force participation rate of people age 65 and older in Germany was 6.1 percent, considerably lower than the OECD average of 14.1 percent.⁵⁰ This low rate has been caused in part by barriers to employment for older adults as well as government benefits that had facilitated early retirement.⁵¹ On the other hand, the increase in labor force participation can be partially attributed to government efforts

to reform the retirement system, which has been driven, in part, to improve its fiscal sustainability.

A large share of Germany's "baby boom" generation has not yet reached retirement age, as the period in which they were born was primarily between 1954 and 1969, with its peak being 1964.⁵² Given that individuals born during that time period will begin to reach age 65 in 2019, Germany's working age population will begin to shrink at an accelerated rate. While the population of those between ages 15

[&]quot;There are indications that companies are trying to avoid hiring older workers, regardless of their qualifications, and prefer younger employees. Reasons for this include a fear among employers that older employees will not fit in well, or will not be able to meet the demands of high-paying jobs. Therefore, older applicants often reject the few offers they receive because they do not match their financial expectations."

Thomas Zwick, Chair of Human Resource
 Management and Organization, University of
 Würzburg

⁵⁰ OECD Statistics.

 $^{^{51}}$ Federal Statistical Office. (2016). Older People in Germany and the EU.

⁵² Federal Statistical Office. (2014). Baby Boomers: Germany's Cohort with the Highest Birth Rate is turning 50.

through 64 in Germany experienced a 2.2 percent decrease from 2005 through 2015, the figure will fall by an additional 22.6 percent by 2050 – equivalent to 12 million individuals.⁵³ The country is addressing this shortage of workers by finding innovative ways to capitalize on the productive potential of its older generation of citizens.

Barriers to Older Adult Employment

The older population in Germany shares many of the same challenges that older adults around the world have when it comes to employment. Experts acknowledge that, as is the case in many countries, perceptions by employers that older workers lack marketable skills is a significant general barrier to employment. despite their being well educated as compared to older populations in other countries.⁵⁴ For example, Thomas Zwick of the University of Würzburg notes, "There are indications that companies are trying to avoid hiring older workers, regardless of their qualifications, and prefer younger employees. Reasons for this include a fear among employers that older employees will not fit in well, or will not be able to meet the demands of high-paying jobs. Therefore, older applicants often reject the few offers they receive because they do not match their financial expectations."

However, similarly to countries like Korea and Japan, seniority-based pay systems in the job market in Germany serve as

"In the job market there is a new trend as well – the government's priority is to make older people be seen as collaborators. In the mid '90s and the beginning of 2000s, a lot of companies retired older employees, but today, especially with the new retirement age of 67, there is a different trend and effort to keep older people longer in the work force."

 Markus Marquard, Ph.D., Managing Director of the Center for General Scientific Continuing Education (ZAWiW) at Ulm University

a disincentive to hiring older workers. Compensation at a company in Germany is often based on the amount of time working there. Therefore, even older adults with years of qualifying experience would often need to accept less pay in order to be competitive. As a result, it is generally more difficult for older adults to get hired. Experts believe that a performance-based pay system should be adopted in order to counteract this, but while seniority-based pay systems are no longer in use within the public sector, the government has yet to make any moves to pressure companies into reforming. The same and the same and the same accompanies into reforming.

In addition to structural barriers, attitudes surrounding older adult employment present a societal challenge. The German

⁵³ UN population data.

⁵⁴ Interview with Jürgen Bauknecht, Research Coordinator at Institute of Gerontology at the Technical University of Dortmund, March 2017.

Zwick, Thomas. (2012). Consequences of
 Seniority Wages on the Employment Structure.
 OECD: Human Resources Management Country
 Profiles. (2012). Better Policies for Better Lives:
 Germany.

Interview with Thomas Zwick, Chair of Human Resources at the University of Würzburg, April 2017.

government has been attempting to challenge the perception that older adults are a burden on society through information campaigns in partnership with civil society organizations, in the hope of creating a positive image around the idea of employing older people by emphasizing the value they bring to the labor force.⁵⁸ One of these campaigns that is ongoing is Experience is the Future ("Erfahrung ist Zukunft"), which was originally launched in 2006 through cooperation between the federal government, business associations, and other NGOs. It functions to actively encourage social, educational, and economic participation of older people through its website and newsletters.59 According to Markus Marguard of the University of Ulm, "In the job market there is a new trend as well - the government's priority is to make older people be seen as collaborators. In the mid '90s and the beginning of 2000s, a lot of companies retired older employees, but today, especially with the new retirement age of 67, there is a different trend and effort to keep older people longer in the work force." However, this attitude change has yet to translate into a change of practice, as it is still quite costly to train and hire workers who are only able to provide a few years of work as compared to younger applicants.60

Reforming the Retirement System

The increasing trend in labor force participation rates among older adults over the past decade can be attributed in part to the Riester reform of 2001 and the Rürup Commission of 2004.61 Motivated by concerns over the sustainability of benefits, these two reforms introduced a new multi-pillar system to reduce reliance on public funds. There are now three pillars to the German retirement system, which include the government-run retirement insurance system, private company plans, and individual voluntary retirement investments. The maximum amount of the public pension that can be received is gradually being decreased from 70 percent to 67 percent of net pay, and this pillar makes up 85 percent of the labor force. 62 As of 2013, the net pension-replacement rate⁶³ in Germany was at 57.2 percent for average earners, compared to the OECD average of 65.8 percent, and just 55.2 percent for low earners, compared to the OECD average of 81.7 percent, 64 meaning that older people in Germany receive a smaller percentage of their pre-retirement earnings than in most OECD countries.

The Rürup Commission also targeted unemployment assistance through its Hartz reforms, one of which slashed

⁵⁸ Interview with Uwe Neumann, Researcher at RWI Essen. August 2016.

⁵⁹ German Federal Government. Demographics: Policies for All Ages.

⁶⁰ Interview with Johann Fuchs, Institute for Employment Research, Nürnberg, August 2016.

⁶¹ Bristow, Tom. (2014). Elderly German Workers Just Keep On Going. The Local.

⁶² How To Germany. (2016). The German Retirement and Pension System – Basic Facts.

⁶³ The OECD defines net pension replacement rate as individual net pension entitlement divided by net pre-retirement earnings and takes into account income taxes and social security contributions.

⁶⁴ OECD Pensions at a Glance. (2013). Germany.

unemployment benefits for older adults from 32 to 18 months, which served to make unemployment insurance much less attractive and feasible as a substitute for early retirement. For years it had been a key financial incentive that pulled older adults out of the labor force early, given that they could use it until they reached the pensionable retirement age. Now, long-term unemployment benefits are means-tested and relatively low, providing an additional incentive for those nearing or entering retirement age to get back to work.

As a result, the labor force participation rates among those ages 55 through 64 as well as those age 65 and older began to increase much more rapidly than before, around 2004. Between 2005 and 2015, the labor force participation rate for those ages 55 through 59 increased from 73.3 percent to 81.1 percent, and the rate for those ages 60 through 64 increased from 31.7 percent to 56.2 percent.

Meanwhile, the rate for those age 65 and older increased from 3.4 percent to 6.1 percent.

More recent government efforts have targeted the retirement age. Raising the retirement age in Germany is a widely disputed issue that has become highly

politicized, since older people make up a significant share of the voter base. 68 In 2007, the labor secretary announced an accelerated increase of the retirement age. One year later, the government decided that beginning in 2012, the retirement age to receive the statutory pension⁶⁹ would be raised from 65 to 67 by 2029 in light of the impending labor shortage.⁷⁰ Despite not being a popular decision among certain political parties and a large share of the general public, there are those in Germany who believe that this retirement age increase to age 67 is not enough to increase labor participation and make retirement benefits sustainable. The Cologne Institute for Economic Research found that people would need to work until age 73 in order to keep pensions at current levels.71

In 2016, the German Federal Bank submitted a proposal to raise the retirement age from 67 to 69 by 2060,⁷² a suggestion that had been made by the Federal Council of the Christian Democratic party in 2013. However, with the federal election approaching in the fall

⁶⁵ The Department of Education and Psychology at the Free University of Berlin. (2014). Further Training for Older Workers: A Solution for an Ageing Labour Force?

Interview with Jürgen Bauknecht, Research Coordinator at Institute of Gerontology at the Technical University of Dortmund, March 2017.
 OECD Statistics.

⁶⁸ People over age 60 accounted for over one-third of potential voters in the 2013 Bundestag Election, according to Federal Returning Officer Roderich Egeler.

⁶⁹ Parchmann, Silke. (2013). The Right to Retirement Pension Information.

⁷⁰ Boersch-Supan, Axel H. and Juerges, Hendrik. (2011). Disability, Pension Reform and Early Retirement in Germany. The National Bureau of Economic Research.

⁷¹ The Local (2016) https://www.thelocal. de/20161130/why-your-children-may-have-to-work-until-age-71-in-germany.

⁷² Manila Standard. (2016). Longer Retirement Age Riles Germans.

of 2017, more attention is being given to social equality and redistribution than to labor market participation reforms. The German population has been generally against raising the retirement age to 67, so experts doubt that any political party will support raising it further in the near future.⁷³

What has moved forward is an effort to encourage older adults to stay in the labor force past the normal retirement age by improving flexible retirement options to make them more attractive to older adults and employers alike. Known as the Flexible Retirement Act ("Flexi-Rente") and approved in October 2016, it allows individuals who work past the normal retirement age to qualify for higher benefits by making pension contributions.74 It also eliminates the employer's contribution to encourage them to hire older workers.75 This new approach is an improvement from the partial retirement systems tested in the 1990s, under which participating individuals earning more than 50 percent of their original income would receive a large deduction from the amount of pension they would have access to. This policy is not included in

the new flexible retirement options.⁷⁶ The law is being implemented in phases – the first provisions came into effect on January 1, 2017, and the last will be instated on July 1, 2017. It is still too early to gauge the effectiveness of this law, and experts are uncertain as to whether the changes will be enough to encourage more older people to stay in the labor force.⁷⁷

Improving Employability and Accessibility to Education/Training

Many of the existing government programs aimed at improving the employability of older adults and increasing their access to education and training focus on establishing positive practices among employers as a means of assisting both current and potential older workers. Like counterparts in other countries, older Germans are more vulnerable to longterm unemployment than younger people as nearly half of all unemployed people over the age of 55 remain out of work for over a year. 78 Government efforts have focused on incentivizing employers to pay particular attention to older adults seeking jobs and to helping human resources departments develop lifelong learning activities and training programs for older adults.

Interview with Jürgen Bauknecht, Research Coordinator at the Institute of Gerontology at the Technical University of Dortmund, March 2017.
 United States Social Security Administration.
 International Update, November 2016: Germany Approves Law on Flexible Transitions from Work to Retirement.

Wisskirchen, Gerlind. (2017). Labor and Employment Law in Germany – What Awaits Us in 2017? International Labor & Employment Law Committee Newsletter.

⁷⁶ Interview with Tabea Bucher-Koenen, Max-Planck-Institute for Social Law and Social Policy, March 2017.

⁷⁷ Ibid.

⁷⁸ Spermann, Alexander. (2015). How to Fight Long-Term Unemployment: Lessons from Germany. IZA Journal of Labor Policy.

In order to help people age 50 and older return to the labor force, from 2005 to 2015 a government program, Perspektive 50+, provided subsidies to local organizations and employers that were willing to prioritize older job applicants. It also worked to find solutions on a regional scale by convincing local companies, as well as the older applicants themselves, of the advantages that older laborers bring to the workplace through regional workshops with project participants, and arranged internships in companies and other placement activities for participants.⁷⁹ This program served to foster a new form of cooperation between the government and employers that benefitted an increasing number of older adults over the course of ten years. In 2008, the program resulted in 70,000 beneficiaries, but in 2011 the number of older workers who were able to reintegrate into the labor force reached 200,000 in that year alone, which was equivalent to about one-third of the potential target group.80 81 In the ten-year period that the program was active, a total of 424,000 older long-term unemployed adults were integrated into the labor market.82 However, the program was not as effective in targeting older

seniors – in 2010, the mean age of all beneficiaries was 54, and only a small number were older than 60.83

Despite the success of Perspektive 50+ in assisting older people in gaining employment, it was not as effective as the German government had hoped with respect to providing targeted assistance, specifically to those older adults considered among the long-term unemployed (over two years out of the job market).84 Given that one-quarter of all unemployed individuals over 55 years old have been employed for over two years,85 the government decided in 2014 to initiate a follow-up initiative the Program to Reduce Long-Term Unemployment ("Programm zum Abbau von Langzeitarbeitslosigkeit"). It focuses on those who have been unemployed for at least two years, and reserves the greatest level of support for those age 50 and older who have been unemployed for at least five years, as well as those with other barriers that inhibit re-entry into the labor force, such as children or health issues.

A total of 333 job centers participate in the program with the goal of helping 23,000 long-term unemployed older

⁷⁹ OECD. Perspective 50+ – Employment Pacts for Older Workers in the Regions, Germany.

⁸⁰ Meaning adults over age 50 looking to get back into the labor force.

⁸¹ Innovative Social Policies for Inclusive and Resilient Labour Markets in Europe (INSPIRES). Perspektive 50 plus Employment Pacts for Older Job Seekers.

⁸² Perspektive 50+. Brochures on the Federal Program.

⁸³ Knuth, Matthias, Stegmann, Tim and Zink, Lina. (2014). The Effects of the Federal Program "Perspektive 50plus."

⁸⁴ Interview with Jürgen Bauknecht, Research Coordinator at the Institute of Gerontology at the Technical University of Dortmund, March 2017.

Spermann, Alexander. (2015). How to Fight Long-Term Unemployment: Lessons from Germany. IZA Journal of Labor Policy.

adults return to the labor market between 2015 and 2020.86 Once employed, these individuals are provided with coaching in order to stabilize their employment situation, as well as subsidies to make up for the initial difference in earnings often caused by the seniority-based pay system that most companies use. Local experts report that the results of the program are still unclear,87 but in order to ensure its effective analysis, the government has pledged to conduct research after the established five-year period of operation to provide insight into the program's ability to contribute to reducing long-term unemployment.88

The government also works to ensure that older adults receive the appropriate support within their place of employment through the Federal Initiative New Quality of Work (INQA). Since 2002, the Federal Ministry for Employment and Social Affairs has been dedicating resources and funding to improve the quality and sustainability of work, with a particular focus on older adults. Specifically, the INQA works with firms to develop and use human resources in ways that are more accommodating to the needs of older adults. Strategies include promoting training within companies,

establishing lifelong learning activities, encouraging knowledge exchange among different generations of workers, and general promotion of diversity management and inclusivity.89 Its goal is to assist 4,000 employers and two million employees effectively, and it is still ongoing. According to Jürgen Bauknecht of the Institute of Gerontology at the Technical University of Dortmund, "It's difficult or impossible to assess the effectiveness of this program. Yet INQA provides information for companies on how to assess their situation and how accommodating their environments are for a diverse range of employees. That's highly important, since one might say there is still a lack of measures to ensure high standards in this way in SMEs, partly due to their small HR departments. whereas the majority of German workers work for SMEs. Therefore, supporting implementation of structures to improve health provision, skills development and retainment might be considered a very important issue."90

In order to compliment efforts to improve workplace conditions for older employees, the German government has also taken action to provide older adults with education and training in order to help them thrive in their positions and become more competitive in the job market.

⁸⁶ Federal Ministry of Labor and Social Affairs. (2016). Program to Reduce Long-Term Unemployment.

 ⁸⁷ Interview with Jürgen Bauknecht, Research Coordinator at the Institute of Gerontology at the Technical University of Dortmund, March 2017.
 ⁸⁸ Federal Ministry of Labor and Social Affairs.
 (2016). Program to Reduce Long-Term Unemployment.

Innovative Social Policies for Inclusive and Resilient Labour Markets in Europe (INSPIRES).
 Federal Initiative New Quality of Work (INQA).
 Interview with Jürgen Bauknecht, Research Coordinator at the Institute of Gerontology at the Technical University of Dortmund, March 2017.

The German vocational training system is recognized worldwide for its quality and reach; 50 percent of all those who exit school undergo vocational training. Otherwise known as the "dual training system," its success can be attributed to the close partnerships between the country's SMEs and public vocational schools, which are required by German law.⁹¹ In order to help older people tap into the opportunities offered by this

advanced training system, in 2002 the government began to allow for vocational training subsidies (which were previously only available to unemployed people) to be available to adults age 45 and older who are employed by an SME with fewer than 250 employees.⁹² In 2012, 18,000 older adults benefitted from this program.⁹³

⁹¹ Federal Ministry of Education and Research. The German Vocational Training System.

 ⁹² Innovative Social Policies for Inclusive and Resilient Labour Markets in Europe (INSPIRES).
 Vocational Training for Low-Skilled Employees and for Older Workers Employed by SMEis.
 ⁹³ Ibid.

Technological Transition

Older German adults stand out for their high levels of technology adoption [] the vast majority are using the Internet at least once per week. The country is also leading in the development of specific technologies intended for older adult use, such as Ambient Assisted Living (AAL) technology, which is intended to assist older people in functioning independently. The government has focused on increasing access to technology as well as further developing innovative technological solutions to assist the older population in their daily lives. Interesting models have emerged for enhancing digital literacy and helping older adults take on a more active role as collaborators in training their peers to use basic technologies.

Digital Diffusion and Divide

With each passing year, an increasing number of German adults are picking up new forms of technology. Fifty-six percent of Germans between ages 65 through 74 were Internet users in 2014, just over the OECD average of 50 percent. Hat is more remarkable is the pace of growth in use among older adults. According to the German government, 67 percent of those age 65 and older were using the Internet every or almost every day by the

first quarter of 2016, while 23 percent used it at least once per week, and only 10 percent used it less often than that.⁹⁵ Among this age group, the Internet is most frequently used for emailing, information searches, online news, and online shopping.⁹⁶

However, a digital divide persists in Germany, particularly notable in smart phone use. As of 2016, while 95 percent of the general population between ages 14 through 29 were smart phone owners, along with 93 percent of those 30 through 49, and 88 percent of all those 50 through 64, only 27 percent of those age 65 and older were as well.97 On the other hand. 51 percent of those ages 60 through 69 used smart phones, indicating that the percentage of those 65 and older who use them is likely to increase in the near future.98 For those who still do not use the Internet, the leading reasons cited by older adults in surveys include the feeling that the Internet and devices that access it are too complicated or difficult to engage with (87 percent), that it is unnecessary to the individual's life (54 percent), that it is not

⁹⁴ OECD Science, Technology and Industry Scoreboard 2015.

⁹⁵ Federal Statistical Office. (2016). Use of Information Technologies.

⁹⁶ Ibid.

⁹⁷ German Institute for Trust and Security in the Internet. (2016). The Digital Worlds of Life for those over 60 Years Old in Germany.

⁹⁸ Initiative D21. (2016). D21 Digital Index: Annual Situation of the Digital Society.

designed for older adults (50 percent), that there is not any useful benefit (48 percent), or that it is unclear what the technology and its function are (5 percent).⁹⁹

Technology Training for Older Adults

To address these gaps, as of 2013 the government has begun to initiate programs intended to provide older people with the skills necessary to use various basic forms of technology. Many of these initiatives utilize a "train the trainer" approach, which involves capitalizing on the volunteerism of the older adult community in Germany to help provide a feeling of comfort and familiarity for those who wish to learn how to use basic technologies in order to make the process more accessible. Those who are trained function as role models who inspire others to get technological training and further develop their own skills.¹⁰⁰

In 2013, the Federal Ministry of Education and Research launched the Senior Technology Ambassadors ("Seniorentechnikbotschafter or STB") initiative, in collaboration with the Federal Working Group of Senior Citizens' Organizations (BAGSO). Developed as a part of Germany's research agenda on changing demographics, it was intended to minimize fears of using technology and

Barbara Keck, Director, BAGSOService Company

to increase accessibility. The program involved training a total of 367 senior volunteers¹⁰¹ functioning as "technology ambassadors" to provide personal support to over 1,400 people ages 50 through 90 who are gaining the skills to use basic technologies.¹⁰² EUR 20,000 (approximately USD 22,500) was granted to the organizations selected to participate in the training.¹⁰³

While this initial program ended after 12 months, when government funding was scheduled to cease, 18 of the 77 total projects have continued operating, thanks to regional working groups of older adults who were able to receive funding from

[&]quot;Senior Technology Ambassadors (Seniorentechnikbotschafter) have successfully used older people to show technology to more older people. Local communities have been able to support this project by creating locations for participants to receive technical advice."

⁹⁹ German Institute for Trust and Security in the Internet. (2016). The Digital Worlds of Life for those over 60 Years Old in Germany.

Doh, Michael, Dutt, Judith, Herbolsheimer, Florian, Jokisch, Rupprecht, Fiona, Mario R., Schoch, Anne J., Schmidt, Laura I., & Wahl, Hans-Werner. (2015). New Technologies in Old Age: Results of the Research Project "FUTA." The Psychological Institute at the University of Heidelberg.

German National Association of Senior Citizens'
 Organizations. Senior Technology Ambassadors
 Knowledge Transfer of Older People for Older People.

German National Association of Senior Citizens'
 Organizations. Senior Engineering Ambassadors.
 German Federal Ministry of Education and
 Research. (2013). Notice of the Federal Ministry
 for Education and Research of Guidelines for the
 Promotion of the Senior Technology Ambassadors
 Initiative – the Dissemination of Knowledge
 from the Elderly to the New Information and
 Communication Technologies.

sponsors outside of the government. In addition, new independent projects have been added under the same framework in areas outside of the original ten federal states. One assessment of the initiative by the Psychological Institute at the University of Heidelberg found that the projects have tended to attract those who are on the younger end of old age, with at least some technical background, but that they have still effectively targeted substantial numbers of older adults with low levels of education and little to no experience with technology. 104 Barbara Keck of BAGSO also stated, "Senior Technology Ambassadors have successfully used older people to show technology to more older people. Local communities have been able to sustain this project by creating locations for participants to receive technical advice."105

Another program focusing on bridging the digital divide is the Federal Ministry of Justice and Consumer Protection's Digital Kompass, which was initiated in 2015. Operated by BAGSO, it is intended to serve as an online portal for older adults who are hoping to teach others to use technology. Following the "training of trainers" approach introduced by the Senior Technology Ambassadors, the online portal provides these older adults with easy access to learning materials while opening up possibilities for

networking and exchange. 106 The goal of the portal is to have 1,000 Internet groups of seniors by 2018, to serve as "multipliers" by working with the many small senior groups in Germany that are focused on enhancing their digital skills.¹⁰⁷ Since May of 2016, there have been 750 subscribers to the Digital Kompass newsletter and 12,000 visitors to the portal. BAGSO has an evaluation scheduled for 2018 as initial funding is only set to last for three years. BAGSO plans to use this to develop new, similar projects that capitalize on the strengths of Digital Kompass and improve upon whatever weaknesses are identified.108

Developing Technology to Support Independence in Old Age

As older adults increase their use of technology, and the next generation of older people becomes tech-savvy, the government has been responsible for leading efforts to use technology to find innovative solutions to help them live independently in their homes for as long as possible. The government hopes to position these ambient assisted living (AAL) technologies on the market as early as possible, and to this end the Ministry of Family Affairs, Senior Citizens, Women and Youth (BMFSFJ), in cooperation with the Federal Ministry of Education and Research (BMBF), has been running a number of projects through its Ambient Assisted Living (AAL) program since 2008.¹⁰⁹

<sup>Doh, Michael, Dutt, Judith, Herbolsheimer,
Florian, Jokisch, Rupprecht, Fiona, Mario R., Schoch,
Anne J., Schmidt, Laura I., & Wahl, Hans-Werner.
(2015). New Technologies in Old Age: Results of
the Research Project "FUTA." The Psychological
Institute at the University of Heidelberg.
Interview with Barbera Keck, Director, BAGSO,
February 2017.</sup>

¹⁰⁶ Interview with Nicola Roehricht, BAGSO, March 2017.

¹⁰⁷ Ibid.

¹⁰⁸ Ibid.

¹⁰⁹ Ambient Assisted Living Germany. (2017).

In 2014, the German Federal Ministry of Education and Research announced that it would be launching a competition among local organizations and municipalities to spur innovation geared toward improving the quality of life for older adults, not just in their homes but in their neighborhood communities as well. This competition is known as the "Innovations for Municipalities and Regions in Demographic Change" competition (InnovaKomm), and the Ministry has allocated about EUR 23 million (approximately USD 26 million) to support the ongoing success of the selected project proposals until 2020. According to federal minister for Education and Research Johanna Wanka, funding these projects through the competition will help shape demographic change in a way that allows all older Germans to benefit, regardless of their living situation or the nature of their communities, by helping them navigate their home and neighborhood environments more easily. 110 Scientific institutions as well as municipal and regional actors took part in this competition.

The five winning projects were launched in 2015 in different regions of the country and focused on improving media competencies, improving public transportation, developing a digital communication network, developing a healthcare-related project for rural areas, and supporting urban living for older residents. One of these projects, UrbanLife +, operates in North Rhine-Westphalia,

¹¹⁰ German Federal Ministry of Education and Research. (2015). Well Looked After in the Future.

Mönchengladbach, and is focused on deploying smart technologies to enhance safety for older people. It has done so by installing street lamps that adjust their brightness to the eyesight of pedestrians, and sensors at junctions and other critical areas to alert them to potential dangers caused by road traffic or other sources. Another initiative, MobiSaar, in Saarland, is developing a comprehensive mobility service for older adults across the entire state by focusing on compiling and evaluating real-time information in stations and on buses and sidewalks. The information will be accessible by a hotline or a smart phone app in order to enable easy travel planning. For longer distances, the project's service center provides volunteers to assist older people with their journey to the train station or bus stop when needed.111

Multiple government agencies have cooperated to fund AAL projects for nearly the past decade, leveraging technology to allow not only for greater mobility, but also fully independent living. In total, the Federal Ministry for Education and Research (BMBF) has funded and carried out 18 research projects, with approximately EUR 45 million (approximately USD 50.4 million), that are intended to assist older people in a number of different aspects of their lives through telemedical solutions, intuitive communication tools, smart devices to assist with housework, and more.¹¹²

¹¹¹ Ibid.

Ambient Assisted Living Germany. Support Programs for Ambient Assisted Living.

One of these AAL solutions is the Daily Care Journal (DCJ), which functions as a sensor-based system that allows nursing networks to record activities and experiences during the daily lives of older persons. The purpose of the DCJ is to provide a care network that helps coordinate care activities among friends, family members, and professional care providers alike. 113 In order to promote the further creation of such AAL innovations. Germany began to hold an annual event in 2008, the AAL-Kongress (Congress for Ambient Assisted Living), which demonstrates ICT solutions within the community, focusing on a different theme each year. 114 The number of participants at this event has grown consistently each year, the last of which took place in 2016, and the nationwide household penetration of AAL projects is currently at 0.5 percent, but it is expected to reach 3.1 percent by 2021.115 However, according to experts, commercialization and practical implementation have been difficult due to skepticism among older adult consumers regarding privacy and data protection. 116

Private-Sector Engagement

While the government has taken the lead on encouraging the development of technology for older adults, the private sector is catalyzing the development of a range of assistive technology applications and has collaborated with government efforts to increase the availability of smart home-based support mechanisms on the market. Aside from technologies intended to support health and long-term care for older adults, companies in the private sector are often involved with the development of AAL technologies as well as their implementation in institutional homes for older people. 117 Furthermore, there are several companies that have designed phones specifically for use by this age demographic in Germany, though such devices currently only have about a 7 percent share of the market, and therefore experts feel that they do not represent the future of technological engagement with the older adult community.118

<sup>Wojciechowski, Manfred and Wiedeler, Markus. (2013). Supporting Care Networks Using the "Daily Care Journal." Inclusive Society: Health and Wellbeing in the Community, and Care at Home.
Klausing, Helmut and Wichert, Reiner. (2011)
Ambient Assisted Living: 7. AAL-Kongress 2014
Berlin, Germany.</sup>

¹¹⁵ Statista. (2017). Ambient Assisted Living (AAL) Highlights: Germany.

Interview with Markus Marquard, Ph.D., Managing Director of the Center for General Scientific Continuing Education (ZAWiW) at Ulm University, April 2017.

¹¹⁷ Ihio

¹¹⁸ Interview with Barbara Keck, Director, BAGSO Service Company, March 2017.



Healthcare and Wellness

The super-aged population in Germany has a high healthy life expectancy, with three-quarters of those aged 65 and above still feeling fit.¹¹⁹ However, the prevalence of chronic conditions and psychological conditions like dementia is growing and driving demand for long-term care (LTC) to increase substantially. Germany is an early mover in requiring LTC insurance and is also working to strengthen homebased care and to widen the scope of beneficiaries, with particular emphasis on the population with dementia. Policies have also endeavored to improve the quality and affordability of care. The government is also focused on ensuring that older adults in underserviced rural areas have access to the same quality of care as in urban areas, leveraging e-health technology.

Health Status and Healthcare System Reforms

Older adults in Germany are in fairly good health, with average healthy life expectancy at ages 60 through 64 rising from 17.9 years to 18.6 years from 2005 to 2015, almost exactly the same as the average for OECD countries. However, dementia rates are high – 20.3 per every 1,000 Germans suffer from dementia, higher than in all other OECD countries apart from Italy

and Japan. ¹²⁰ In fact, two-thirds of all older adult residents in nursing homes suffer from dementia today. ¹²¹ Chronic conditions are also a significant issue – 24 percent of people ages 70 through 85 experience five or more diseases at once. ¹²² Experts note that the country's focus on medical care has been a constraint on providing the necessary care for helping older people deal with these chronic conditions in their everyday lives. ¹²³

In Germany, health insurance is universal and has been mandatory for all citizens and legal residents since 2009.¹²⁴ Virtually all coverage is provided either by the statutory health insurance system (SHI), which is made up of nongovernmental health insurance funds and is responsible for covering 86 percent of the population, or private health insurance (PHI), which is made up of over 40 private companies and covers 11 percent of the population.¹²⁵¹²⁶

 $^{^{\}rm 119}$ Federal Statistical Office. (2016). Older People in Germany and the EU.

¹²⁰ OECD. Health at a Glance 2015.

¹²¹ Interview with Horst Krumbach, founder of Generationsbrucke, February 2017.

World Health Organization. (2015). World Report on Ageing and Health.

¹²³ Interview with Horst Krumbach, founder of Generationsbrucke, February 2017.

Busse, Reinhard and Blümel, Miriam. (2014).
 Germany Health System Review. Health Systems in Transition: Vol. 16 No. 2 2014.

The rest of the population, such as soldiers and policemen, are covered under special programs.
 Busse, Reinhard and Blümel, Miriam. The German Health Care System. The Commonwealth Fund.

Total health expenditure was 11.3 percent of GDP in 2014 – higher than in all other countries included in this study, apart from the U.S.¹²⁷ According to a 2014 survey conducted by the Commonwealth Fund, ¹²⁸ 81 percent of Germans age 65 and older receive care either the same day or the day after they request it, which is second only to France and New Zealand. In the past year, only 7 percent of older people in Germany had experienced cost-related access problems in the past year and/ or had out-of-pocket expenditure of over EUR 1,775 (approximately USD 2,000). ¹²⁹

The German healthcare system has experienced numerous large-scale reforms, but there have also been targeted efforts to benefit those living in previously underserviced communities. including older adults. For example, the Act to Strengthen Care Provision in the SHI System was a sweeping reform intended to equalize the quality of health and care provision across all regions. 130 Fully executed in 2015, it involved several general policies to improve the quality and efficiency of healthcare operations and allowed for the establishment of medical treatment centers specifically for adults with mental disabilities. Some have been complemented by more localized community-based efforts.

Older people in Germany have benefited from the establishment of Medical Care Centers (MVZ) in areas where residents would otherwise need to travel a long way to see a doctor.131 These rurally located centers are staffed by doctors with different specialties who travel to them two or three times a week. The MVZ first began as a concept that was supported by the Social Democratic Party in the early 2000s, and their establishment was approved as a part of a law passed in 2004 to modernize public health insurance (in German, the "Gesetz zur Modernisierung der Gesetzlichen Krankenversicherung").132 Today, many are recipients of government funding, though resources can also be pooled from communities and private investors. Older people have been very engaged with these MVZ, and community members are also very active in keeping them running. 133

Increased Focus on Preventative Care

Germany's National Action Plan to promote healthy nutrition and more physical activity, IN FORM, seeks to shift focus toward preventative care. This plan was originally adopted in 2008, with the goals of promoting healthier diets and increasing physical activity by 2020. It has been responsible for supporting over 100 initiatives from the Federal Ministry of Food and Agriculture and the Federal Ministry of

WHO Global Health Expenditure Database.
 Countries included in this survey were Australia,
 Canada, France, Germany, the Netherlands, New
 Zealand, Norway, Sweden, Switzerland, the UK and

Pew Research Center. (2014). Health Affairs:Among 11 Nations, American Seniors StruggleMore with Health Costs.

German Federal Ministry of Health. TheDemographic Strategy of the Federal Government"Every Age Counts."

¹³¹ Interview with Lea Knopf and Lena Dorin, The German National Association of Senior Citizens' Organizations (BAGSO), March 2017.

¹³³ Interview with Lena Dorin, Health and Long-Term Care Senior Policy Officer, German National Association of Senior Citizens' Organisations (BAGSO) February 2017.

Health that are intended for people of all ages. Policymakers expect that these will help to decrease the number of those who need LTC. Additionally, it has been involved with programs that specifically target older people. One example focuses on improving nutritional knowledge among senior citizens and provides them with complete diets, while another emphasizes staying active in nursing homes and strategies for prevent falls.

In addition, the German Government's Act on the Promotion of Health Promotion and Prevention (Prevention Act – PravG), which entered into force in July of 2015, allocates health insurance funds and nursing funds of over half a billion euros (approximately USD 560 million) for health promotion within schools, municipalities, businesses, and nursing homes alike. These funds will also be used to further the development and implementation of early-detection screening tests for people of all ages and to improve vaccination protection.134 Geared toward the entire population, it aims to reduce the prevalence of chronic conditions in old age.

E-Health and Health Technology

The use of technology as an innovative tool to address health and care-related issues facing older adults is becoming a more common practice in Germany. Health IT has become Germany's eighth most prominent IT sector, and the passing of Germany's eHealth Law at the end of

2015¹³⁵ encourages further use of Health IT and telehealth applications by imposing financial penalties on providers if its provisions are not followed. 136 German private-sector development of e-health, or m-health (mobile health) products has been the largest driver of growth within the worldwide market. A 2014 study conducted by McKinsey revealed that over 70 percent of all older patients in Germany are interested in pursuing digital healthcare services – giving them significant potential to serve as future consumers of such services - and specifically seeking information relating to services and products intended to assist with chronic conditions. 137 In recent years, telehealth solutions intended to benefit older people have begun to emerge, and the private sector has taken the lead on developing robotic technology to assist them in nursing homes as well as at home.

Some municipalities have made targeted efforts to ensure that older adults can benefit from the increasing prevalence of innovative telehealth services. One of these efforts is CCS Telehealth Ostsachsen, which began in Saxony in 2015 as a means of extending a broad telemedical network into rural areas. The goal is to devise a means for doctors and nurses to monitor their older adult patients remotely so that they can respond much

Company.

German Federal Ministry of Health. The
 Demographic Strategy of the Federal Government
 "Every Age Counts."

¹³⁵ Most of the provisions of this law came did not take effect until mid-2016.

United States International Trade
 Administration. (2016). 2016 Top Markets Report
 Health IT Country Case Study: Germany.
 Biesdorf, Stefan and Niedermann, Florian.
 Healthcare's Digital Future. McKinsey &

more quickly in the event of a medical emergency. The initiative consists of three separate sub-projects, including telecoaching, for older people with heart conditions; telestroke, for those who have recently suffered from a stroke; and telepathologie which allows for patients to send pictures of tissue for their specialists to analyze remotely.138 Some of its networks have spread beyond the founding region, and in addition to the Free State of Saxony, T-Systems International and the European Union have supported the project.139 However, some experts point out that those who could benefit from this initiative still require training to be able to use this kind of telemedicine effectively, and that there are not enough older adults involved in its development.¹⁴⁰

Though the government has not focused on robotics, private-sector companies are driving the development of robots that can assist older adults at home and in care facilities. Fraunhofer IPA, for example, has been improving on its Care-o-bot design, which can now help residents with documentation or recording, handling drinks, navigating physical obstacles easily, and even playing basic memory games.¹⁴¹ While further development of this technology could prove beneficial on a large scale, Dr. Markus Marquard of Ulm

University observes, "In Germany today, older people don't trust robots – they fear that they will experience social isolation as a result of machines taking care of them instead of people, which is a cultural difference from countries like Japan." 142

LTC: Reforms to Home-Based Care

In addition to health insurance, long-term care insurance (LTCI) is also mandatory for all legal residents in Germany. While it covers both institutional and home care, the majority of older adults choose to stay in their own private homes, and this has remained consistent over the past decade. Older adults prefer to remain independent in their home environment or with family members for as long as possible, and twothirds (67 percent) of all adults in Germany provide informal LTC to a dependent.¹⁴³ In fact, use of care at home is increasing at a much faster pace than institutional care. As of 2014, more than twice as many older adults received long-term care at home as within institutions. From 2000 through 2014, as the need for LTC continued to grow, home care met 83 percent of new demand. 144 In light of this trend, Germany's recent policies regarding LTC have increasingly focused on older adults receiving home-based care from formal and informal caregivers.

¹³⁸ CCS Telehealth Ostsachsen. Future Telemedicine: Our Vision.

¹³⁹ CCS Telehealth Ostsachsen. Projects: INAN-SOS (Integration of Ambulatory Aftercare in the Stroke Network Ostsachsen).

¹⁴⁰ Interview with Barbara Keck, Director, BAGSO Service Company, February 2017.

 $^{^{\}rm 141}\,$ Vitelli, Romeo. (2013). Can Robots Help Care for the Elderly?

¹⁴² Interview with Markus Marquard, PhD, Managing Director of the Center for General Scientific Continuing Education (ZAWiW) at Ulm University, April 2017.

Robert Koch Institute. (2015). Informal
 Caregivers – Germany's Largest Nursing Service.
 OECD Statistics.

Reforms to strengthen home-based care have primarily involved supporting caregivers and expanding benefits to provide more comprehensive care to beneficiaries, and fundamentally redefining the idea of "in need of care" to be more inclusive in order to widen the scope of beneficiaries. The government chose to focus first on increasing benefits for current care recipients through the Long-Term Care Realignment Act of 2012, and more recently the First Act to Strengthen Long-Term Care of 2015 in order to prepare for the new definition of need.¹⁴⁵

As a part of the 2012 Act, funds were allocated by way of monetary transfers to those responsible for taking care of their older adult relatives, and free training courses were made available for family caregivers that focused on how to provide LTC effectively. The law gave caregivers access to a professional substitute care-provider during holidays. 146 The First Act to Strengthen Long-Term Care increased benefits for individuals receiving care at home by over one billion euros (approximately USD 1.12 billion) each year, and new supplementary benefits were introduced to reimburse services such as housekeeping assistance, companion caregivers, and volunteer helpers.¹⁴⁷ Further, those receiving care at

the lowest grade (care level 0), primarily dementia patients, were given access to day, night, and short-term care for up to six weeks per year – providing relief to family caregivers. Additionally, LTCI began to pay an earnings-replacing family caregiver benefits for ten days off of work so that they are financially secure while attempting to make care arrangements for an older adult relative. 149

In the beginning of 2017, the Second Act on Strengthening Long-Term Care came into full effect. While it also expanded benefits to improve care for those receiving it at home, its most significant impact was the restructuring of the system for classifying patients receiving care at home and in institutions, according to their need of care. Previously, LTC recipients were classified within three different levels of care in order to determine the appropriate benefits, but this act changed the system entirely to be based on assessment of mobility, cognitive and communicative abilities, behavioral and psychological problems, ability to organize everyday life, and ability to function independently in light of illness and need of therapy. 150 This resulted in the creation of five new levels of need in order to account for older people with dementia and other mental and psychological conditions more effectively. This change to the insurance system, which came into effect in the beginning of 2017, is projected to result

¹⁴⁵ Interview with Lena Dorin, Health and Long-Term Care Senior Policy Officer at BAGSO, March 2017.

Busse, Reinhard and Blümel, Miriam. (2014).
 Germany Health System Review. Health Systems in Transition: Vol. 16 No. 2 2014.

¹⁴⁷ German Federal Ministry of Health. (2014). Federal Minister of Health Gröhe: "We have put together a good package of benefits for persons with care needs and their family caregivers."

The Health Systems and Policy Monitor. Health Systems in Transition (HiT) Profile of Germany. (2017)

¹⁴⁹ Ibid.

German Federal Ministry of Health. (2015). Gröhe: More Assistance for Persons in Need of Long-Term Care and their Relatives.

in half a million LTCI claimants within the years to come, ¹⁵¹ the majority of whom will receive care at home, and experts believe it will have an extremely positive impact for those with psychological conditions such as dementia. ¹⁵²

LTC: Reforms to Institutional Care

Though serving a smaller share of LTC recipients in Germany, institutional care facilities remain a crucial part of the country's LTC system, but they have been plagued with understaffing and low satisfaction with quality of care. An OECD report found that in 2012, fewer than 60 percent of nursing home residents received the proper treatment for pressure ulcers, or bedsores, with no improvement since 2007.¹⁵³

To address these deficiencies, a substantial part of the First Act on Strengthening Long-Term Care focused increasing the staff within institutional homes. According to Germany's Center for European Economic Research, nearly two-thirds of care facilities in the country are understaffed.¹⁵⁴ To that end, the resident-

to-caregiver ratio in these homes was required to decrease from 24 patients for every staff member to 20. This increased the number of care providers in homes from 25,000 to 40,000 in 2017 – a necessary measure in order to ensure the quality of care within these institutional settings. Benefits for recipients of residential LTC were also increased by EUR one billion (approximately USD 1.12 billion) each year as a part of this act.

In an additional effort to address the caregiver labor shortage, Germany has increased the hiring of foreign workers to serve as caregivers (both in institutions and at home). As of 2015, 16 percent of all care facilities in the country had begun to recruit caregivers from abroad, most frequently from Spain, Poland, Croatia, and several Eastern European countries. 156 While this sort of outsourcing has been met with criticism, as foreign workers earn significantly less than German workers earn on average, experts with Germany's Workers Welfare Institution (AWO) believe the practice is helping to meet the steadily growing need for care professionals. 157

¹⁵¹ Ibid.

¹⁵² Interview with Lena Dorin, Health and Long-Term Care Senior Policy Officer at BAGSO, March 2017.

OECD. (2013). Germany: Highlights from "A Good Life in Old Age? Monitoring and Improving Quality in Long-Term Care," OECD Publishing, 2013

¹⁵⁴ Deutsche Welle. (2015). Germany is Desperately Seeking Caregivers.

German Federal Ministry of Health. (2014).
 Federal Minister of Health Gröhe: "We have put together a good package of benefits for persons with care needs and their family caregivers."
 Deutsche Welle. (2015). Germany Is

Deutsche Welle. (2015). Germany Is Desperately Seeking Caregivers.

Deutsche Welle. (2013). Foreign Workers Meet Elder Care Needs in Germany.