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Extending youth protection past age 18 : a cost-benefit analysis

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Partners

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EDJeP : a brief introduction

The Study on the Future of Placed Youth (EDJeP) was developed by the Canada Research Chair in Evaluating Public Actions Related to Young People and Vulnerable Populations (CREVAJ) and its partners in order to fill a gap in knowledge of how youth in care prepare for independent living. It also explores the post-care period, which has received very little attention in Québec. In a context where Western societies are all prolonging youth and deferring the transition to adulthood, EDJeP is interested in the living conditions and the track to independence of youth ages 17 to 21 who were in placed in out-of-home care. These youth face a paradoxical imperative of autonomy when they reach adulthood. EDJeP is the first representative large-scale Québec study on this theme.

A three-phase longitudinal study. Of a target population of 2,573 Québec youth, a representative sample of 1,136 young people in out-of-home care were met in the first wave of interviews (response rate of 67.3% from among the 1,600 youth whose contact information we obtained). The interviews were based on a detailed survey that covers these young people's situations and experiences in various areas of life. These youth, who were 17 years old at the time of the first wave, were met again in 2019 (more than 800 youth have been interviewed to date), and will be met again in 2020 to monitor their progress toward autonomy.

A broad range of data sources. The data from these questionnaires will also be combined with data obtained in the youth integration project (PIJ) involving 2573 respondents, including those who participated in EDJeP, who met the eligibility criteria for the study. The administrative files of youth in youth protection (PIJ) were consulted in order to collect specific information about the service and care trajectories. We also obtained authorization from the Commission d'accès à l'information (CAI) to access administrative data that would let us track the trajectory of use of the services of the MESRS (education), MTESSS (last resort assistance), the RAMQ (social services and health) [1], along with other population data to better understand the transition issues that youth in care face, and to improve practices and policies. The cross-referencing of these dimensions is intended to enhance and adapt the services offered to youth who leave care, together with the associated social policies.

A national and international comparison. In addition to the longitudinal approach, EDJeP was designed to allow comparative analyses with two other important studies. First, a comparison with *the Québec Longitudinal Study of Child Development* (QLSCD) let us analyze the trajectories of young Quebecers within the general population and compare them with those of youth who leave care. These comparisons should provide insight into the challenges that youth face when they age out of care.

In addition, major collaboration with the team leading the *Étude longitudinale sur l'autonomisation des jeunes après un placement* (ELAP) in France will allow an international comparison that will extend the knowledge gained from the study considerably.

Cooperation with youth. EDJeP is conducted in close cooperation with the members of the EDJeP youth committee. The committee is made up of 12 young people ages 18 to 35 who have all been in care and who wish to contribute to the EDJeP project in order to improve the services offered to youth who are leaving youth centres and beginning their path to autonomy. The youth committee advises the researchers and various committees and partners involved in the research. It aims to ensure that the participation of youth is significant and that their rights are considered in each phase of the EDJeP research, from project planning to execution.

1. For each of these data sources, an equivalent random sample of youth not participating in EDJeP will be formed to identify similarities and differences in the service trajectory between EDJeP youth and their counterparts in the general population.

Introduction

Currently, under the youth protection system in Québec, most youth placed in care until they reach adulthood face an abrupt end to their access to youth services on their eighteenth birthday. Results from the longitudinal study on the future of youth in care (EDJeP) have shown that these youth have significantly poorer educational outcomes than their peers of the same age, together with a much higher rate of homelessness.

The purpose of this analysis is to estimate the costs and benefits that a program to extend youth protection services would generate for Québec society. We base our projections on the effects observed in California where, since 2012, young people have the option of remaining in the child welfare system until age 21.

In our analysis, we therefore analyze the voluntary extension of care up to age 21. Thus, young people would have the choice of leaving or staying in the foster system after they turn 18. The broad outlines of the proposed program are inspired by the California example. The program includes a rent subsidy and psychosocial follow-up to help the young person transition to adulthood. For youth who are neither working nor studying, participation in the Service d'Apprentissage aux Habitudes de Travail (sheltered workshop, or SAHT) is required.

Our analysis is not the first of its kind on this subject. Several other studies have been conducted to explore whether increasing support to ease the transition to adulthood of youth who age out of care is economically beneficial. Although these studies make varied hypotheses and look at different benefits, they all come to the same conclusion : investing in youth is financially advantageous [2].

Why extend services past age 18 ?

One of the justifications for providing additional support after age 18 is that youth who are still in care when they reach adulthood have significantly bleaker outcomes than other youth their age. Results from the EDJeP data show that almost one in five youth who leave care experiences at least one episode of homelessness. In addition, these youth have much more serious education setbacks than the general population, even when compared with special needs students (see Table 1).

For several years, young adults have tended to leave the nest later. The 2016 Canadian census showed that more than a third (34.7%) of young adults (20 to 34 years old) live with at least one of their parents. This percentage has been increasing since 2001.

A Statistics Canada analysis using data from the 2001 General Social Survey shows that the odds of leaving the family home at a certain age are generally decreasing. The decline is particularly pronounced for Generation Y (see Figure 2).

These findings point to a social trend characterized by an extended period of transition to adulthood. Young people are staying with their parents longer than before, for complex reasons. The real estate market, higher education, the labour market, and cultural and social changes are all factors that influence the decision whether or not to leave the family home.

2. See for example the pioneering works for Canada : Office of the Provincial Advocate for Children and Youth. (2012). 25 is the new 21 : The costs and Benefits of Providing Extended Care Maintenance to Ontario Youth in Care Until Age 25. Toronto, Office of the Provincial Advocate for Children and Youth.

Table 1 – Table 1 : Graduation rate at age 19

All of Quebec :	81.8%
Diploma holders	77.4%
Qualification holders	4.4%
Delayed start of high school	55.1%
1st generation immigrants	78.3%
Public system :	78.6%
Special needs	56.2%
Disadvantaged	73.2%
Private system	92.9%
LCQF*	24.8%

Source : Ministère de l'Éducation et de l'Enseignement supérieur, LCQF data.
Graduation rate after seven years ; students start high school at age 12.
* Weighted percentage measured during Wave 2 of EDJeP when youth are about 19 years old. The EDJeP data surveyed youth from all placement settings.

Further, the current pandemic situation is prompting many young people to return to their parents in order to combat isolation and economic hardship.

In short, the current reality is that parental support after age 18 is important for youth success. Given that youth who leave care at 18 have much less access to these supports, if any, it is crucial for youth protection to fill this gap.

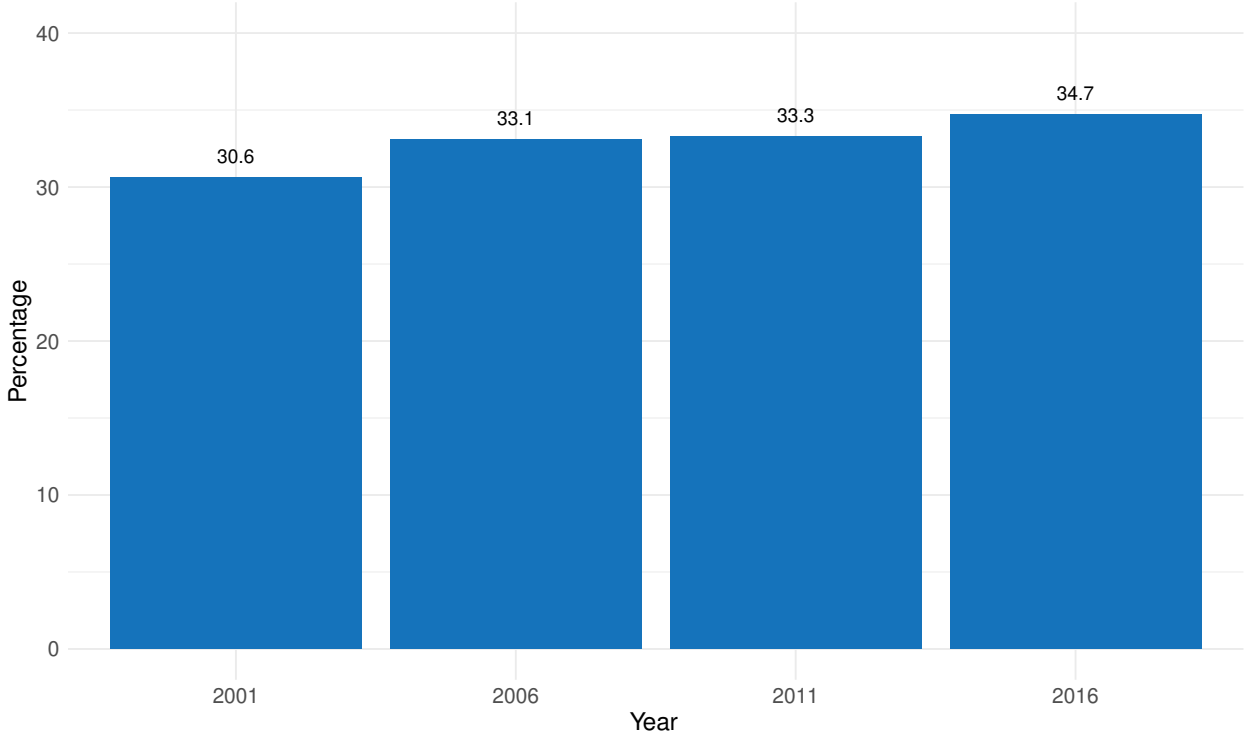
Due to methodological constraints, this study examines a program where services are extended to age 21. However, there is good reason to believe that the ideal age limit would be higher, at up to age 25 (Van Breda et al., 2020 ; Goyette, 2019).

Methodology

Hypothesis formulation : The California case

Few jurisdictions have data on the effectiveness of Extended Foster Care (EFC). In France, the ELAP project (EDJeP's "sister" project) led by Isabelle Frechon shows that the "young adult contract" (extension to age 21 of housing stabilization and continuing education services) has led to an 11 percentage-point (from 19% to 8%) reduction in homelessness among young people leaving care. Analysis of the effects of this program also shows that the longer a young person stays in the system, the better the likelihood of graduation. Thus, the scientific literature and our analyses of EDJeP data clearly demonstrate that improving graduation

FIGURE 1 – Proportion of 20-34 people who live with at least one parent



Source : Statistics Canada

rates is associated with a higher probability of being employed and a lower risk of homelessness. Finally, it is easier to act early to prevent dropout, because it is more difficult to return to school as an adult (see, in particular, Frechon and Lacroix, 2020 ; Frechon and Marquet, 2019 ; Courtney, 2019).

The proposed program does not currently exist in Quebec, so there are no data to assess the effects of the program on young people in the youth protection system (DPJ). Our predictions about the expected effects of the extension of services are therefore hypothetical. These assumptions are based on the results of an evaluation of the Extended Foster Care (EFC) program in California. EFC allows youth to remain in youth protection until age 21. The analysis therefore looks at a similar program that would be implemented in Québec.

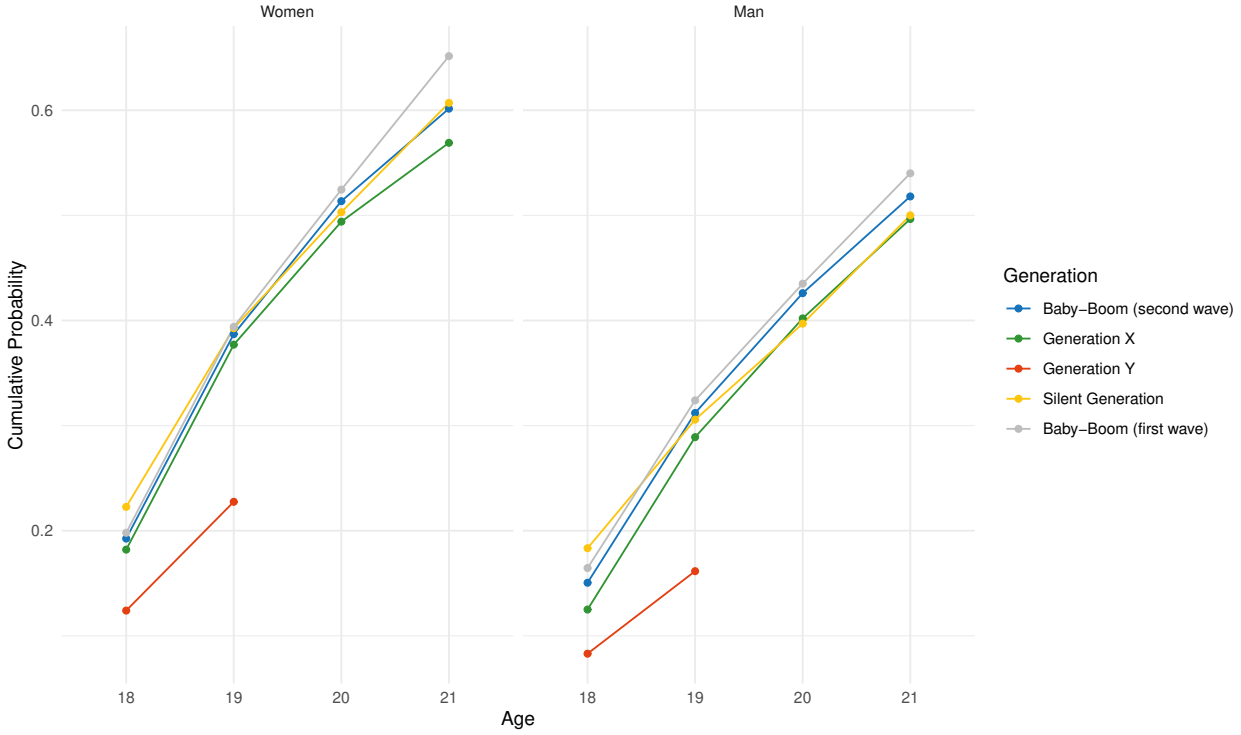
The evaluation uses data from a longitudinal questionnaire similar to the EDJeP project (CalYOUTH) as well as California state administrative data to estimate the effects of participation in EFC on many variables. CalYOUTH's latest results show that participation in EFC is associated with higher education, reduced crime and homelessness, lower social assistance enrolment, and improved financial health.

Hypotheses derived from the California results

— Each year spent in the program increases the likelihood of obtaining a high school diploma (HSD) by 8.2%.[3] After three years, the probability thus increases by 24,6%.

3. Percentage point

FIGURE 2 – Cumulative probability of having left the family home in 2001



Source : Statistics Canada, ESG 2001

— Each year spent in the program averts homelessness by 15 days on average. This means that 45 days of homelessness will be avoided during the three years of the program.

Data sources and list of parameters

Other details

Discounting : As the discount rate, we use the nominal rate for long-term Québec bonds, i.e. 3.5%, from which we subtract the long-term average inflation rate of approximately 2%. The discount rate used is therefore 1.5%. There is considerable uncertainty regarding the discount rate to be used. To counter this problem, we present the benefits according to different discount rates in the appendix.

Study period : In our analysis, youth begin working at age 21 and leave the workforce at age 65, for a working life of 44 years.

Typical youth : Benefits and costs are estimated for an average young person who would participate in this program. We therefore look at the likelihood that this young person would obtain his or her HSD, the ensuing expected increase in income, and the gains that governments could derive from this scenario.

Unestimated benefits : Our estimates are conservative. We do not include certain benefits that are observable but difficult to measure in Québec. For example, in the case of California,

Table 2 – Estimation from data

Source	Estimated parameter	Method	Benefit
Canadian Income Survey, 2016	Marginal income gain	Ordinary least squares	Personal income
	Marginal increase in the amount of provincial tax paid	Ordinary least squares	Provincial tax
	Marginal increase in the amount of federal tax paid	Ordinary least squares	Federal Taxes
	Marginal decrease in the amount paid in transfers	Ordinary least squares	Savings in transfers
Survey of Household Spending, 2009	Marginal propensity to consume	Ordinary least squares	Gains in GST income Gains in QST income
LCQF data	Likelihood of receiving social assistance	Inference on proportion	Saving on social assistance

there are large significant effects showing a reduction in crime.[4] These effects result in considerable benefits that are omitted from this analysis.

Conservative points of the analysis : Further, our assumptions about education imply an increase in high school graduation only, and no effect on obtaining vocational or technical diplomas, nor an indirect increase in college and university graduation. Finally, costs include a 15% administration fee for the extended care program. These administrative costs are in line with other cost-benefit analyses conducted on this subject.

Estimated benefits

The effect of education on income

Regarding the program's hypothetical effect on education, the California study found that each year spent in the program increased the probability of obtaining a high school diploma

4. We will soon be releasing an analysis of the various issues related to the consumption of health and social services, education, and social assistance, based on Québec administrative data from the EDJeP cohort.

Table 3 – Research in the scientific literature

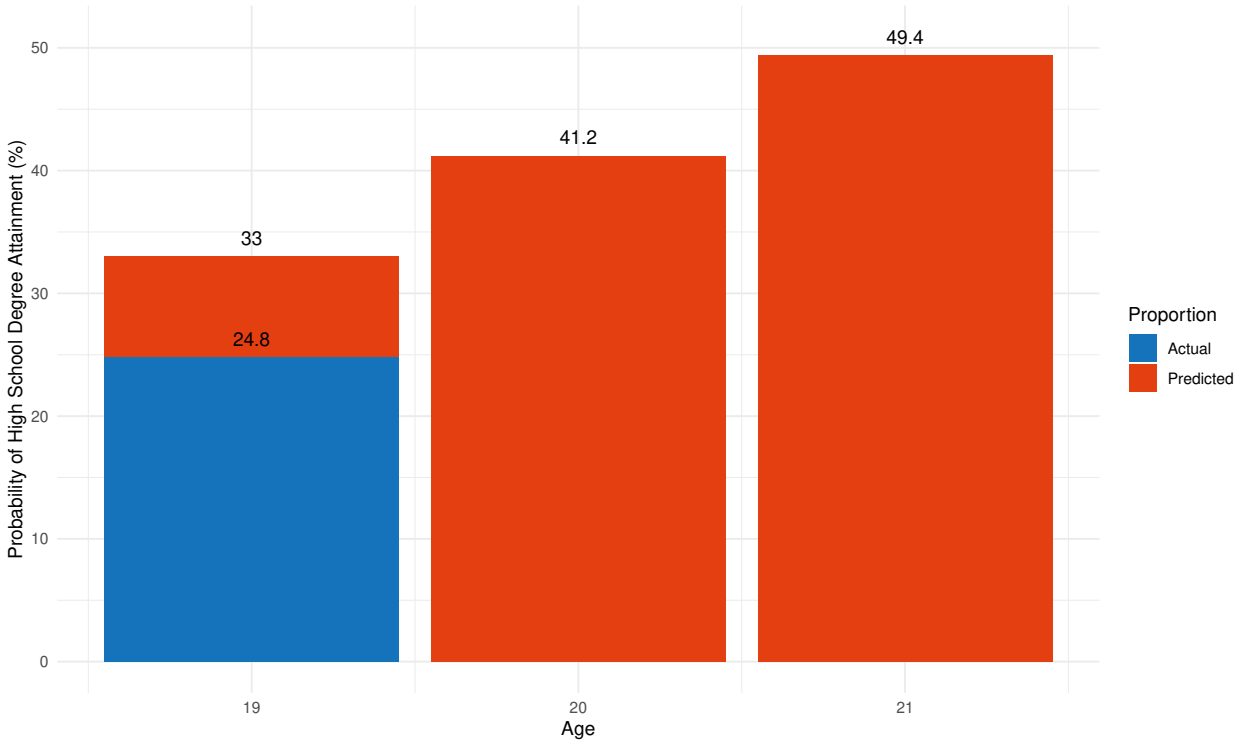
Source	**Estimated parameter**	**Method**	**Benefit**
Latimer, E. A. et al. (2017). Costs of services for homeless people with mental illness in 5 Canadian cities : a large prospective follow-up study. CMAJ Open. 5(3) : E576-E585.	Annual cost of services for a homeless person in Montreal	Analysis of financial statements	Saving by reducing homelessness
Courtney, M. E., Okpych, N. J., et Park, S. (2018). Report from CalYOUTH : Findings on the Relationship between Extended Foster Care and Youth's Outomes at Age 21. Chicago. Chapin Hall at the University of Chicago.	Reduction in the number of days of homelessness per year	Ordinary least squares	Saving by reducing homelessness
	Increased likelihood of graduating from high school	Linear probability model	Personal income GST/QST income gains Gains in tax revenues Savings from transfers

Table 4 – Cost estimates

Source	**Cost**
Financial Statements AS471 2018-2019	Average cost of psychosocial follow-up
	Average cost of one year of participation in sheltered workshop (SAHT)

by 8.2 percentage points.[5] We cannot be certain that the effect in Quebec would be identical to that observed in California. However, this remains the most likely hypothesis.

FIGURE 3 – Predicted probability of a youth in care graduating from high school Probability of obtaining an HSD (%)



Source : EDJeP

If the probability of obtaining an HSD increases by 8.2 percentage points with each year spent in extended care, a 24.6% increase in the probability of graduation is expected after three years. EDJeP data suggest that only 24.8% of youth currently or formerly in care obtained their HSD at age 19. Figure 3 shows the expected graduation rate of youth placed in the program.

We use Québec data from the 2016 Canada Income Survey to estimate the increase in annual after-tax income for high school graduates. We calculate that obtaining an HSD would result in the youth earning on average about $4,700 more per year. Weighting this figure by the gain in the probability of obtaining a high school diploma and multiplying it by the length of the youth's working life yields the expected income benefit. Note that after-tax income is used to avoid double-counting tax benefits.

The increase in the youth's income implies that governments will derive tax benefits. The same methodology is used to calculate the annual tax gain at the federal and provincial levels.

An increase in youths' income should lead to an increase in consumption. Governments will therefore benefit from an increase in consumption tax revenues. To calculate these gains, we

5. The observed effect cannot be interpreted as a causal effect because the California study lacks an identification strategy.

Table 5 – Benefits of obtaining an HSD on after-tax income

Marginal gain in income following graduation from high school	$4,706.37
Marginal gain in the probability of obtaining the HSD	24.6%
Working life (21 to 65 years)	44 years
Expected benefit	**$**37, 095.55

Table 6 – Tax gains

Provincial tax gains	
Marginal tax amount paid by high school graduates	$1,005.80
Marginal gain in the probability of obtaining the HSD	24.6%
Duration of the program	44 years
Expected provincial tax gain	**$**7,927.73
Federal income tax gains	
Marginal tax amount paid by high school graduates	$803.77
Marginal gain in the probability of obtaining the HSD	24.6%
Duration of the program	44 years
Expected federal tax gain	**$6,335.33**

estimate the share of the additional income that will be spent on consumption. In economics, this is called the marginal propensity to consume. The data used are from the Survey of Household Spending 2009.

For SHS respondents in Québec who hold a high school diploma, the estimated marginal propensity to consume was 95.23%. [6] Quite simply, this figure means that if a person earns $10 more, they are expected to spend $9.52. Applying this rate to the extra income earned in the youth's life as calculated above yields consumption expenditures. To obtain the tax revenue, we then simply apply the tax rate.

6. Here, we hypothesize that the marginal propensity to consume will be constant throughout the young person's working life. In reality, this parameter varies over time depending on economic conditions. Given the amount of the tax benefits, the impact of a constant marginal propensity to consume is negligible.

Table 7 – GST gains

Gain in annual income after obtaining an HSD	$4,706.37
Marginal propensity to consume	95.23%
GST rate	5%
Expected GST gain	**$1,766.22**

Table 8 – GST gains

Gain in annual income after obtaining an HSD	$4,706.37
Marginal propensity to consume	95.23%
QST rate	9.98%
Expected QST gain	**$3,523.60**

Reducing social assistance expenditures

As in other jurisdictions, our analysis assumes that a youth's participation in the program would make him or her ineligible for the social assistance program, thereby generating savings in social assistance during program participation. [7] In this analysis, we estimate the percentage of youth receiving income assistance at age 19 from the EDJeP data. We assume that this rate remains constant between the ages of 18 and 21. We also assume that the average amount received by these young people is the same as that received in Québec as a whole. The average monthly benefit in Québec was $910.60 in February 2020.

Table 9 – Saving on social assistance during program participation

Current probability of receiving social assistance	11.28%
Monthly social assistance premium	$910.60
Number of months in the program (3 years)	36
Expected savings	**$3,641.62**

Homelessness Prevention

California's Extended Foster Care program has reduced the amount of time youth face homelessness by an average of 15 days per year. As a result, three years spent in the proposed extended care program would reduce the time youth experience homelessness by 45 days.

7. Of course, the present analysis overlooks important debates about how to secure the specific rights of young people in care given their vulnerability and common social rights, such as social assistance (see Frechon and Lacroix 2020).

The average annual cost of a homeless person in Montréal is taken from a study that estimates the cost incurred by a homeless person with mental health problems in five Canadian cities, including Montréal. Based on questionnaires and on analyses of financial statements, the study estimates the cost to be approximately $56,000 per year.

Table 10 – Calculating savings linked to homelessness

Number of days of homelessness avoided over 3 years	45
Cost per day	$154.54
Avoided expenses	**$ 6,954.16**

Saving in government transfers

A transfer is a payment from the government to an individual. Examples of transfers include social assistance and unemployment insurance. Raising the level of young people's education will improve their economic situation throughout their lives, which translates into a lesser need for government support.

We estimate these transfer savings based on the 2016 Canadian Income Survey data for Québec. On average, a person who obtains an HSD requires about $4,400 less per year in government transfers. As we did for the other benefits, we multiply this figure by the gain in probability of obtaining an HSD and the length of the young person's career to obtain the expected benefit.

Table 11 – Calculation of transfer savings

Marginal savings in annual transfers for high school graduates	4, 413.97$
Marginal gain linked to the probability of graduating from high school	24.6%
Duration of the program	44 years
Espérance de l'épargne en transferts	**$34,790.87**

Cost Estimates

To get an idea of the costs generated by the program, we calculate the costs related to the various program services. Admittedly, youths' circumstances may vary ; some youth may require more services than others. Therefore, we create a service profile based on the youth's current situation.

Psychosocial follow-up

As is the case before they reach adulthood, youth in "extended care" will be able to benefit from psychosocial follow-up. To estimate the cost of such follow-up, we use the 2018-2019 AS471 financial statements of the 16 CIUSSS/CISSS of the Ministère de la Santé et des Services sociaux. Activity centre **5402 Assistance and Support (LPJ-LSSSS)** is described in the MSSS financial management manual as :

"This sub-centre groups together the psychosocial follow-up activities for internal and external users or the rehabilitation of external users directed at children, their families and loved ones. The users referred to in this sub-centre of activities concern those subject to the Youth protection act or the Act respecting health services and social services."

Table 12 – Cost of a psychosocial follow-up

Average of the 16 CIUSSS*	$ 4,501.84
Duration of the program	3 years
Total cost of psychosocial follow-up	**$13,505.52**

* The figure presented here is the average cost per user (net unit cost) for the last four fiscal years.

Rent subsidy

The program includes a rent subsidy modelled on programs implemented in the United States, including that in California. Under this program, each youth receives $1,000 on condition that he or she meet regularly with the person responsible for his or her placement.

Table 13 – Cost of a rent subsidy

Monthly amount	$1,000
Duration of the program	3 years
Coût total de l'aide au loyer	**$36, 000**

Sheltered workshop (SAHT) Program

Participation in the SAHT program would only be applicable to youth between the ages of 18 and 21 who are neither studying nor working. The cost is estimated based on the AS471 financial statements. Activity centre 5602 - Service d'apprentissage aux habitudes de travail (sheltered workshop) is defined in the financial management manual as :

"This sub-centre groups together activities inherent to the realization and application of programs organized for social rehabilitation and learning about work habits directed at young people with adjustment difficulties. These youth are admitted or registered."

Table 14 – Cost of one year's participation in SAHT

Average of the 6 CIUSSS *	$16,182.65
Duration of the program	3 years
Total cost of participation in SAHT program	**$48, 547.95**

* Only 6 CIUSS show this item in their financial statements.

Average cost per youth

Table 15 below illustrates the service profile assigned to each youth based on his or her current status at Wave 2 (mean age 19) of EDJeP. All youth receive the rent subsidy and psychosocial follow-up.

The costs per youth depend on the youth's situation. The table below summarizes the services and costs according to the youth's situation. Weighting costs by the percentage of youth in a given situation provides a weighted average cost for a typical youth. Note that we add administrative expenses of 15%.

Table 15 – Cost according to the youth's situation

Activity	**%**	**Services**	**Cost**
Studying	17.8	Psychosocial follow-up Rent subsidy	$49,505.52
Studying and working	21	Psychosocial follow-up Rent subsidy	$49,505.52
Working only	33.7	Psychosocial follow-up Rent subsidy	$49,505.52
Neither studying nor working	27.6	Psychosocial follow-up Rent subsidy Sheltered workshop (SAHT)	$98,053.47
Weighted average			$62,904.75
Administrative expenses (15%)			$9,435.71
Average cost per youth			**$72,340.47**

Results and conclusion

The results of this analysis show that, even with conservative calculations, the benefits of supporting the transition to adulthood outweigh the costs. By including 95% confidence

intervals on the estimated parameters, we calculate the return on each dollar spent in the program.

Table 16 – Summary of benefits and sensitivity analysis

Summary with %95 confidence intervals			
Measure	**Amount ($)**	**Lower margin of error ($)**	**Higher margin of error ($)**
After-tax income gains	37,095.55	24,227.66	49,963.43
Reduced spending on homelessness	6,954.16	6,245.01	7,700.05
Reducing social assistance expenditures	3,641.62	3,052.52	4,230.73
GST revenues	1,766.22	1,461.87	2,070.57
QST revenues	3,523.60	2,916.42	4,130.78
Provincial income tax	7,927.73	4,535.84	11,319.63
Federal income tax	6,335.33	3,422.06	9,248.60
Decrease in transfers	34,790.87	31,013.93	38,587.80
Total	**102 ,35.10**	**76,875.32**	**127,231.60**
Cost	**72,340.47**	**72,340.47**	**72,340.47**
Benfit/Cost ratio	**1.41**	**1.06**	**1.76**

If a cohort of 2,000 youth were to participate in the program, which is approximately equal to the number of youth with a cumulative placement of one year or more who exit care each year [8], total expenditures for this cohort would be approximately **$146 million**. The benefits would range from **$154 million to $254 million**. These results show that raising the age limit from 18 to 21 is economically beneficial to society. Again, these estimates are very conservative. However, there is reason to believe that there are even more benefits to be gained by raising the age limit to 25. More research and experimentation by child protection agencies is needed to better understand the effects, benefits, and costs associated with a 25-year age limit. In addition to the economic arguments, we have also shown that extending youth protection supports can improve the health and well-being of young people in care. This is a major issue because Québec is one of the only jurisdictions in Canada that has not put a systematic and multidimensional support system in place for youth once they reach age 18. In fact, considering the substantial needs of young people who age out of care and the fact that many

8. The number 2,000 is a very conservative estimate relative to the definition of the target population in EDJeP, namely that the youth be in care at the time of observation (data extraction). Note that youth who left a placement one month prior to observation are not included among the 2,000 youth in the study.

of them have no family support, we must ask ourselves whether services that improve the social integration of young people formerly in care should be a right, and not a privilege.

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Technical Appendix

Table 17 – Models based on ECR 2016 data

	After-tax income	Provincial tax amount	Federal tax amount	Transfers
Constant	21,932.13*** (615.10)	1,379.33*** (162.14)	1,070.13*** (139.26)	10,447.95*** (180.54)
High school	4,706.37*** (832.85)	1,005.80*** (219.53)	803.77*** (188.56)	-4,413.97*** (244.45)
CEGEP	11,483.06*** (766.54)	2,070.76*** (202.06)	1,620.01*** (173.54)	-4,884.44*** (224.99)
University	27,934.63*** (813.55)	5,605.50*** (214.45)	4,675.99*** (184.19)	-5,100.73*** (238.79)
Comments	9,183	9,183	9,183	9,183
R2	0.14	0.08	0.08	0.06
Adjusted R2	0.14	0.08	0.08	0.06
Residual type error (df = 9,179)	689,245.90	181,681.00	156,044.10	202,304.90
F statistic (df = 3 ; 9,179)	482.02***	278.60***	266.03***	196.36***

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 18 – Margin of error for the cost of psychosocial follow-up

Period	Average cost	Margin of error (95%)	Lower limit	Upper limit
Per year	4,501.84$	247.86$	4,253.98$	4,749.7$
Over three years	13,505.52$	743.58$	12,761.94	14,249.10$

Table 19 – Marginal propensity to consume

	Consumer spending
Constant	23,644.26***
	(3,199.7430)
Total income	0.9523***
	(0.0834)
Comments	281
R2	0.3187
Adjusted R2	0.3162
Standard residual error (df = 279)	1,373 515.00
F statistics (df = 1 ; 279))	130.5008***

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 20 – Discount rate and profit

Discount rate	Net present value of profits per youth
2%	85,929.24$
5%	51,087.19$
10%	28,916.69 $